# A COMPARISON STUDY OF THE CONTINUOUS PROGRESS PROGRAM IN THE URBANDALE SCHOOL DISTRICT

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A Field Report

Presented to

The School of Graduate Studies

Drake University

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In Partial Fulfillment

of the Requirements for the Degree

Master of Science in Education

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by

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August 1970

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# CHAPTER I

## THE PROBLEM AND DEFINITIONS OF TERMS USED

Today more and more elementary schools are replacing the traditional grades with a variation of the ungraded program. The program has had a slow start but seems to be gaining ground. With this growth has come favorable comment from the participating parents, teachers, and administrators. However, there has not been a great deal of objective evidence comparing the achievements of nongraded students to that of graded students. Goodlad stated that "nongrading is supported by some plausible sounding claims and theories rather than by research".[1]

### I. THE PROBLEM

Statement of the problem. This study is being conducted in order to determine the effect on elementary school students in the subject district of the continuous progress program.

The effect will be established by (1) comparing the level of academic achievement at the fourth grade (E-5) level between pupils educated under the traditional graded

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[1] John I. Goodlad, "Classroom Organization," Encyclopedia of Educational Research, 3rd Edition, The American Educational Research Association (New York: The Macmillan Co., 1960), p. 22.

system and those educated under the continuous progress program in the Urbandale, Iowa, School District during the school years 1966-1970, and (2) determining whether or not there were differences in the level of academic achievement, as measured by the Iowa Tests of Basic Skills, in the areas of Vocabulary, Reading, Language-usage, References, Arithmetic, and the Composite scores.

In the spring of 1966, after an extensive study of the concept of ungraded schools, the Urbandale School District conceded that their educational program was outdated. Today, the Urbandale continuous progress program is based on two fundamental beliefs. One is that all children can learn but not in the same length of time, in the same manner, the same concepts or by the same procedures. The other belief is that children can be responsible for much of their own learning.

Purpose and scope of the problem. Pupils more and more achieve above or below grade levels with the result that these levels become increasingly burdensome to teachers who see the conflict between grade standards and realities of pupil development.[1] However, there still are not enough teachers actually aware of the need to change their teaching

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[1] John I. Goodlad and Robert H. Anderson, The Nongraded Elementary School, Revised Edition (New York: Harcourt, Brace & World, Inc., 1963), p. 42.

practices in ways which will enhance the development of their pupils. In conducting this study, an attempt was made to measure the differences, if any, that the continuous progress program, which is a form of the ungraded approach to education, has had upon pupils in the Urbandale School District.

Limitations. This study was limited to only those fourth grade (E-5) pupils of the Urbandale School District. Also, to be included in this study, pupils must have attended school in the Urbandale School District during their second grade (E-3) school year and their recorded scores of the Otis Lennon Mental Ability tests taken during the second grade (E-3) elementary school year must have been available. These tests are the control factor. There were 495 pupils involved in this study. Of these, 189 had been involved solely in the graded system. The remainder, or 306 had been in the continuous progress program since their second grade (E-3) level.

## II. DEFINITIONS OF TERMS USED

Graded system. Williams defined the graded system as:

> Graded school--an elementary school in which children are placed according to chronological age and are identified at each stage as "first-graders",

"second-graders", and "third-graders". Pupils are promoted or retained at the end of each school year.[1]

Continuous progress program. The investigator will use Goodlad's definition of the continuous progress program:

> Organizationally, a nongraded school is one in which the grade levels and grade labels representing years of vertical progress are replaced by a plan of continuous upward progress. Conceptually, it is intended to eliminate the promotion -- nonpromotion adjustment mechanism of graded schools; to raise the ceilings and lower the floors of attainment expectancies for learners, thus encompassing their individual differences, to encourage the utilization of content and materials in accordance with pupil individuality; and to force pedological attention to individual differences and the individual.[2]

No matter what name it bears -- ungraded school, primary unit, continuous progress program or multiaged school, the nongraded school has essentially removed all grade barriers. The terms "ungraded", "nongraded" and "continuous progress" are synonymous, as used by the investigator in this study.

Level. In this study the term "level" has been used to describe a segment of learning. This term is referred to many times during discussions of the continuous progress

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[1] W. Williams, "Academic Achievement in a Graded School and in a Non-Graded School," Elementary School Journal, LXVII (December, 1966), 136.

[2] John I. Goodlad, "Cooperative Teaching in Educational Reform," National Elementary Principal, XXXXIV (January, 1965), 10.

program.

Grade. The term "grade" as used in this study refers to a segment of time rather than as a segment of learning.

## III. PROCEDURES

It was mentioned in the introductory statement of this study that more and more elementary schools are replacing the traditional grades with a form of the ungraded program. A review of the available research literature was conducted with the express purpose of (1) gaining knowledge of the continuous progress program, (2) determining the extent of the educational system's changing to an ungraded system and (3) gaining an insight as to the techniques used in academic evaluation studies. It was found that there have been very few evaluation studies comparing graded versus ungraded school programs.

An interview was conducted with Lyle Kehm, Superintendent of Schools, Urbandale School District, and permission was obtained for access to the appropriate test scores of all pupils.

Frank Nugent, Curriculum Director of the Urbandale School District, was interviewed. His advice and suggestions concerning the general approach of the evaluation of the pupils' progress was obtained.

The evaluation of the continuous progress program was

accomplished by using the Otis Lennon Mental Ability tests taken during the second grade (E-3) elementary school year as a control factor.

Recorded scores of the Iowa Tests of Basic Skills of the fourth grade (E-5) level pupils were obtained for all those pupils who were at that level during the school years 1966-1970. The appropriate Otis Lennon Mental Ability test scores for these pupils were then obtained for evaluation.

The continuous progress program was evaluated in this research by comparing two years of fourth grade (E-5) level classes in the traditional graded system (1966-1968) with two years of the same grade or levels in the continuous progress program (1968-1970).

A comparison of the continuous progress program to the graded system was made of the achievement, as measured by the Iowa Tests of Basic Skills, in the areas of Vocabulary, Reading, Language-usage, References, Arithmetic and the Composite scores of fourth grade (E-5) classes over a period of four successive years (1966-1970). The data collected were illustrated by using the single-digit nine-point stanine scale as obtained from the Administrative manual of the Iowa Tests of Basic Skills.

# CHAPTER II

## REVIEW OF THE LITERATURE

This review will include a brief history of the progress of the nongraded school system. In addition, some background information has been provided as to the planning, introduction and implementation of the continuous progress program in the Urbandale School system. Finally, results of three comparison studies between the nongraded and graded school systems is summarized.

In historical perspective the nongraded school is anything but a totally new concept. It includes some of the advantages of the old traditional one-room rural school. In such a school, with its cross-section of ages and grades, the teacher had an excellent opportunity to develop a more flexible style of operating in order to serve the wide range of pupils' needs. Even today there are educators who insist that the one-teacher school was a high-water mark in American education.[1]

Almost immediately after the graded schools made their appearance in the cities, and before their establishment in the rural areas, some educators objected to the desirability of such a system. In 1868, a plan of frequent

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[1] Stuart E. Dean, Nongraded Schools (Washington, D. C.: U. S. Department of Health, Education, and Welfare, 1964).

promotion and reclassification was introduced into the St. Louis school system. This plan maintained graded structure but reduced rigidity by regrouping at six-week intervals those pupils who varied markedly from the rest of the group. By the 1870's Francis Parker was attacking the grade-to-grade organization of textbooks.

The Pueblo Plan (Colorado) was introduced in 1888. It encouraged individual progress, each pupil following a differentiated channel of a multiple track system. The Batavia Plan (New York) employed additional teachers to give special assistance to slow learners so that they might not become unduly retarded.

A different approach was taken at North Denver, Colorado, where the gifted pupils were singled out for such help. Burk's work at the San Francisco Normal School extended the earlier Pueblo Plan. Grades were retained but the work was divided into units. Successful test performance signified completion of the unit's specified subject matter. There were no grade failures. Pupils progressed on an irregular front, subject to subject, according to the number of units satisfactorily completed.

Soon after the beginning of the twentieth century, President Charles Eliot of Harvard and President William Harper of Chicago were calling for flexible school organization to support unique abilities. John Dewey's work at the

Laboratory Schools of the University of Chicago challenged established practices of his time. His school eliminated arbitrary classification of grades, textbooks, and subject matter, and encouraged both the use and enrichment of children's daily experience in and out of the classroom.

In more recent times. The Winnetka and Dalton Plans used an individualized task approach. In the former, Carleton Washburne abolished grade promotion and failure as such. Studies were divided into individual and group activities with the individual activities further divided into tasks. Pupils divided their time almost equally between individual work and social activities.

In the Dalton Plan, Helen Parkhurst replaced formal recitation with the conference. The rooms were laboratories, each child having his own contract and seeking help from several teachers rather than from a single homeroom teacher. However, the so-called nonacademic learnings were dealt with on a total class basis. These and various other schemes are not always readily seen as attempts to break down graded structure. They were, however, designed with the intent to modify or reduce some of the undesirable features of the graded system and to help pupils of varying abilities move ahead without being hampered by uniform grade expectations.[1]

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[1] John I. Goodlad and Robert H. Anderson, The Nongraded Elementary School (New York: Harcourt, Brace & World, Inc., 1963), pp. 49-51.

In more modern times, the first formally recorded program of nongrading in the primary grades with an unbroken record is credited to Milwaukee in 1942. A second landmark was the adoption of the program in Appleton, Wisconsin, in 1947. Since then the movement has spread slowly though steadily. At the present time the trend is appreciably accelerated. The increase is so rapid that reliable figures are no longer available.

In the spring of 1966, after an extensive study of the concept of ungraded schools, the Urbandale School District staff conceded that their educational program was outdated. After the Board of Education joined in this concern, the preparation of the Urbandale School's Primary Continuous Progress Program was begun in the fall of 1966.

The basic philosophy and principles were shaped by Superintendent Lyle Kehm, Assistant Superintendent Richard Boyer, Elementary Principals Marian Hamlin and Kern Severtson, and the curriculum director. A committee of teachers reviewed the proposals, tried out materials and ideas in their classrooms, and relayed information to other teachers and parents. Visitations of teachers and administrators were arranged to schools with established ungraded programs. Doctor Hazel Weakly of Drake University gave a great deal of assistance in preparing the faculty and briefing parents.

The continuous progress program was in effect

throughout the Urbandale School District for the lower elementary grades (kindergarten thru third grade, or K thru E-4) during the 1967-1968 school year. It was during this school year that Principals Marian Hamlin, Kern Severtson, and Don Pack and their staffs instigated and refined organizational procedures and teaching-learning techniques for the program. The movement was toward an individualized continuous progress program with considerable emphasis on team or cooperative teaching. Two basic decisions were reached. Learning activities were to be arranged within teacher planned structured time and pupil planned unstructured time. Course content was to be blocked into learning contracts making use of teacher-pupil initiative and multi-media materials and equipment to accomplish behavioral objectives.

The board of education authorized two-week extended contracts in June, 1968, for seven teachers to study the entire elementary program and make recommendations for extension of the continuous progress program into the intermediate department. This program was extended into the upper elementary grades (fourth grade thru sixth grade, or E-5 thru E-7) at the beginning of the 1968-1969 school year.[1]

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[1] Lyle W. Kehm and J. Frank Nugent, "Language Arts and Mathematics" (Urbandale, Iowa: Urbandale Community Schools, 1969).

The investigator reviewed the results of several studies in which comparisons were made of the nongraded versus graded programs. The first of these was conducted in the Washington Elementary School (Shamolin, Pennsylvania, Public Schools) beginning with the 1960-1961 academic school year.

All students entering the first grade were assigned to one of two groups. The experimental group was operated under a nongraded program with the control group following the more conventional graded program. Students were kept in these programs for three consecutive academic school years with new students assigned on a random basis to these groups as they reported to the school.

Comparison of the students' achievement in this study was limited to reading readiness. The students' reading readiness levels were determined for both groups during the first two weeks of the school year. Nine reading levels were established for the experimental group.

All teachers involved in this project were above average in teaching ability and were assigned randomly to each group.

The conclusions drawn from this project were that, first of all, most teachers favored the nongraded program. It was interesting to learn, however, that parents seemed to prefer whichever program to which their child had been

assigned.

It was discovered that students assigned to the nongraded group appeared to show more progress during their first one and one-half academic years. However, it was interesting to learn that by the end of the third academic school year, the nongraded group had only a relatively slight advantage as to achievement over the graded group.

It was concluded that the nongraded approach may very well have an advantage only for the very young and beginning students. The researchers indicated that further study needed to be done.[1]

A second study by Williams involved a comparison of achievement between nongraded and graded programs with all students receiving instruction under their respective programs for three years. Each group tested was composed of thirty-eight students who were selected for their similarities of age, sex and intelligence quotient. There were two groups of students, with the control group being those educated under the graded program.

Students of both groups were given the Stanford Achievement Test at the end of their third year in the ele-

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[1] J. Charles Jones, J. William Moore, and Frank Van Devender, "A Comparison of Pupil Achievement After One and One-Half and Three Years in a Nongraded Program," The Journal of Educational Research, LXI, No. 2 (October, 1967), 75-77.

mentary school. Grade equivalents in the areas of Word Meaning, Paragraph Meaning, Spelling, Word Study Skills, Arithmetic Computation, Arithmetic Concepts and total score were used in the study. It was found that there was no significant difference between students in the graded and non-graded schools except in the area of Paragraph Meaning, in which the graded school seemed to produce better results.

It was found that the top-ranked students in the non-graded program performed at a higher level than the top-ranked students in the graded program. However, the tests indicated that the low-scoring students seemed to perform better if educated under the graded system.

Williams concluded that there was very little relationship between the graded and nongraded school programs as they affected students' achievement. In addition, graded schools seemed to be aware of the differences in children's abilities and to make allowances in planning and instruction for these differences. There was strong indication that pupil achievement may be affected more by the pupil-teacher ratio than by the graded or non-graded organization.[1]

A third study pertained to a comparison of test results of students in a Burlington, Vermont, elementary

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[1] Wilmajean Williams, "Academic Achievement in a Graded School and in a Non-Graded School," The Elementary School Journal, LXVII (December, 1966), 135-139.

school. This school had for several years an ungraded program in reading and a graded program in all other subjects. Skapski gave the second and third graders the Stanford Achievement Test, Primary Battery.

The children's achievement in reading was compared with their achievement in arithmetic. It was found that the children were benefiting from the individualized instruction they were receiving in the nongraded program. It was interesting to learn that the greatest gain was for the children of very superior intelligence who seemed best suited for the nongraded approach to education.[1]

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[1] Mary King Skapski, "Ungraded Primary Reading Program: An Objective Evaluation," The Elementary School Journal, LXI (October, 1960), 41-45.

# CHAPTER III

## PRESENTATION OF DATA

The investigator will present comparisons of pupil achievement levels of students on the continuous progress program with those on the graded system. The effects of the continuous progress program as compared to the graded system were evaluated in this research by comparing two years of fourth grade (E-5) level classes in each of the two programs or systems.

The data collected for this evaluation are all objective-type information in that they are in the form of test scores on standardized devices. Test scores were collected at the second grade (E-3) level and at the fourth grade (E-5) level.

A measure of the ability of the pupils involved in this study was determined by using the test scores of the Otis Lennon Mental Ability tests given at the second grade (E-3) level. A comparison was then made of the ability levels and the pupils' achievement levels at fourth grade (E-5), as measured by the recorded scores of the Iowa Tests of Basic Skills.

The continuous progress program was evaluated by comparing two years of fourth grade (E-5) level classes in the traditional graded system (1966-1968) with two years of the

same grade or levels in the continuous progress program (1968-1970).

Comparisons between the continuous progress program and the graded system were made of the pupils' achievement levels, as measured by the Iowa Tests of Basic Skills, in the areas of Vocabulary, Reading, Language-Usage, References, Arithmetic and the Composite Scores.

A difficulty in comparing achievement and ability is that the two scores are reported on a different basis using different scales. The measure of ability, as reflected by the Otis Lennon Mental Ability tests, was reported as an Intelligence Quotient. The Iowa Tests of Basic Skills records achievement results as a percentile. Consequently for making direct comparisons, it was necessary to have the two sets of recorded scores shown on the same type of scale. This was accomplished by use of the Stanine scale. This scale, a standard - nine scale, was most suitable for this evaluation.

In translating achievement and ability tests scores to a Stanine scale, two purposes were accomplished. First, it placed both the ability and the achievement scores on the same scale. Second, it provided for grouping in such a way as to eliminate the over-interpretation of small differences which may have resulted from errors of measurement.

After both sets of scores were put into Stanine form, each pupil's two scores were plotted on a two-way chart. One dimension of this chart was the ability measure, the other dimension the achievement measure. Twenty-four such charts were used. A chart was designed for each of the four groups which comprised the four academic school years from 1966-1970. The twenty-four charts reflected the comparison of results for each of the four groups in the six areas of Vocabulary, Reading, Language-Usage, References, Arithmetic and the Composite Scores.

The charts prepared for this study were intended to reflect the extent of over-achievers and under-achievers in each group in each of the six fields of measurement. It would be expected that a pupil who would score in one of the lower Stanines in ability would also score in one of the lower Stanines in achievement. If he were in one of the middle Stanines in ability he would be expected to be in a middle Stanine in achievement and, similarly, if he were in an upper Stanine in ability he would be expected to be in an upper Stanine achievement.

The charts were prepared on the basis that an under-achiever was a pupil who was more than one Stanine below his ability level in achievement. An over-achiever was a pupil who was more than one Stanine above his ability level in achievement.

Figure 1, which appears in the Appendix, illustrates the comparison of Vocabulary Achievement and Ability for the fourth grade students of 1966-1967. The comparison is made by use of stanines.

Thirty-two students, by stanine placement, were in the lower right portion of the figure. These students are the under-achievers. They represent 38.6 per cent of the entire group of eighty-three, on which this particular comparison was made.

Four students in the upper left portion of the figure represent over-achievers, 4.8 per cent of the group of eighty-three.

As well as Figure 1, all subsequent figures are in the Appendix. Results of the twenty-four figures are summarized in the two tables shown in this chapter. Table I reflects the percentage of under-achievers in each of the six subject areas.

In the Vocabulary Achievement area, fourth grade students attending the graded school system during the school years 1967-1968 had the largest percentage of under-achievers. This group was composed of 45.9 per cent under-achievers compared to the 1968-1969 continuous progress program group which had the least percentage of under-achievers of 38.2 per cent.

Results of the Reading Achievement scores were that

the 1968-1969 continuous progress program group had the highest percentage of under-achievers, 52.1 per cent, whereas the least percentage of under-achievers, 39.8 per cent of the group, was credited to the continuous progress program group of 1969-1970.

Students belonging to the continuous progress program group of 1969-1970 had more under-achievers, percentage-wise, in the area of Language-Usage than any other group. They had 46.3 per cent of their group classified as under-achievers. The group with the least percentage of under-achievers was the 1968-1969 continuous progress program group with 39.0 per cent.

In the References Achievement area, the 1968-1969 continuous progress program group led with the highest percentage of under-achievers, 54.4 per cent. On the other hand, the leader in the least percentage of under-achievers was the graded school system 1967-1968 group with 49.1 per cent.

The graded system group of 1966-1967 had 69.9 per cent of their group recorded as under-achievers in Arithmetic Achievement, the most of any other group. Only 56.3 per cent of the 1969-1970 continuous progress program group were classified as under-achievers. This latter group had the least percentage of under-achievers in this Arithmetic Achievement area.

The Composite Scores section of this study shows that there were a greater percentage of under-achievers, 56.6 per cent, in the graded system group of 1966-1967. The continuous progress program group of 1969-1970 had the least percentage, 45.9 per cent, of any of the groups.

TABLE I

PERCENTAGES OF UNDER-ACHIEVERS, FOURTH GRADE (E-5), URBANDALE, IOWA, SCHOOLS, 1966-1970

| School Year | Vocabulary | Reading | Language-Usage | References | Arithmetic | Composite Scores |
|---|---|---|---|---|---|---|
| 1966-67 | 38.6 | 48.2 | 43.4 | 53.0 | 69.9 | 56.6 |
| 1967-68 | 45.9 | 43.0 | 43.5 | 49.1 | 58.5 | 48.0 |
| 1968-69 | 38.2 | 52.1 | 39.0 | 54.4 | 64.7 | 51.9 |
| 1969-70 | 39.8 | 39.8 | 46.3 | 49.4 | 56.3 | 45.9 |

Table II shows the percentage of over-achievers in the six subject areas. It was interesting to learn that 9.9 per cent of the continuous progress program group of 1969-1970 were classified as over-achievers in the area of Vocabulary Achievement. This was the highest percentage of over-achievers of any of the groups. The 1966-1967 graded system group had the least percentage of over-achievers, 4.8 per cent.

As in the area of Vocabulary Achievement, the group

with the highest percentage of over-achievers in Reading Achievement was the 1969-1970 continuous progress program group with 7.5 per cent. Only 2.1 per cent of the 1968-1969 continuous progress program group were recorded as over-achievers. This 1968-1969 group had the least percentage of over-achievers of any of the groups in this study.

In Language-Usage Achievement, the 1969-1970 continuous progress program group again led the way with the highest percentage of over-achievers, 7.5 per cent, whereas the least percentage of over-achievers, 4.8 per cent, was found in the graded system group of 1966-1967.

This investigator found 5.7 per cent, the most of any group shown as over-achievers in References Achievement, among the 1967-1968 graded system group. In this area, the lowest percentage of over-achievers, 2.4 per cent, was among the 1966-1967 graded system group.

The 1967-1968 graded system group had the greatest percentage, 3.8 per cent, of any group in Arithmetic Achievement. The graded system group of 1966-1967 had the least percentage of over-achievers, 2.4 per cent.

In the area of Composite Scores Achievement, the highest percentage of over-achievers was credited to the 1969-1970 continuous progress program group with 3.8 per cent. The group with the least percentage of over-achievers was the continuous progress program group of 1968-1969 with

1.5 per cent.

TABLE II

PERCENTAGES OF OVER-ACHIEVERS, FOURTH GRADE (E-5), URBANDALE, IOWA, SCHOOLS, 1966-1970

| School Year | Vocabulary | Reading | Language-Usage | References | Arithmetic | Composite Scores |
|---|---|---|---|---|---|---|
| 1966-67 | 4.8 | 3.6 | 4.8 | 2.4 | 2.4 | 3.6 |
| 1967-68 | 6.4 | 5.6 | 6.5 | 5.7 | 3.8 | 2.9 |
| 1968-69 | 5.6 | 2.1 | 6.8 | 4.4 | 2.9 | 1.5 |
| 1969-70 | 9.9 | 7.5 | 7.5 | 5.0 | 2.5 | 3.8 |

# CHAPTER IV

## SUMMARY AND CONCLUSIONS

The purpose of this study was to determine the effect, if any, the continuous progress program has had on the elementary school students of the Urbandale, Iowa, School District.

Data for this study were obtained by measuring the students' achievement, as shown by the recorded test scores of the Iowa Tests of Basic Skills, in the areas of Vocabulary, Reading, Language-Usage, References, Arithmetic and the Composite Scores. These test scores were obtained for all students of the subject district attending fourth grade (E-5) classes during the school years 1966-1970, excluding those students whose Otis Lennon Mental Ability test scores taken during the second grade (E-3) school year were not available. These Otis Lennon Mental Ability test scores were the control factor for this study and, as such, were the basis used in determining the students' ability levels. All test scores obtained by the investigator were illustrated by using the single-digit nine-point Stanine scale as outlined in the Administrative Manual of the Iowa Tests of Basic Skills as to achievement levels. The Otis Lennon Stanine scale was used in illustrating ability levels.

# I. SUMMARY

On the basis of the data obtained for this study, the investigator observed the following:

1. In the areas of Vocabulary, Arithmetic and Composite Scores, the continuous progress program group of 1968-1969 had a lesser percentage of under-achievers than the graded system group of 1966-1967, and the continuous progress program group of 1969-1970 had a lesser percentage of under-achievers than the graded system group of 1967-1968. Hence in these areas, the continuous progress program groups had a lesser percentage of under-achievers than did the graded system groups.
2. As to the area of Reading, the 1966-1967 graded system group had a lower percentage of under-achievers than did the 1968-1969 continuous progress program group. However, the 1967-1968 graded system group had a higher percentage of under-achievers than did the 1969-1970 continuous progress program group.
3. The continuous progress program group of 1968-1969 had a lesser percentage of under-achievers in the area of Language-Usage than did the graded system group of 1966-1967. On the other hand, the graded system group of 1967-1968 had a lower percentage

of under-achievers than the 1969-1970 continuous progress program group.

4. In the area of References, the graded system group of 1966-1967 had a lower percentage of under-achievers than the continuous progress program group of 1968-1969, and the graded system group of 1967-1968 had a lower percentage of under-achievers than the continuous progress program group of 1969-1970. Hence in this area of References, the graded system groups had a lesser percentage of under-achievers than did the continuous progress program groups.

5. As to the data pertaining to over-achievers in the areas of Vocabulary and Language-Usage, the continuous progress program group of 1968-1969 had a larger percentage of over-achievers than the graded system group of 1966-1967, and the continuous progress program group of 1969-1970 had a larger percentage of over-achievers than the graded system group of 1967-1968.

6. In the area of Reading, the 1966-1967 graded system group had a larger percentage of over-achievers than did the 1968-1969 continuous progress program group. However, the 1967-1968 graded system group had a lower percentage of over-achievers than did

the 1969-1970 continuous progress program group.

7. The continuous progress program group of 1968-1969 had a greater percentage of over-achievers in the area of References than did the graded system group of 1966-1967. However, the continuous progress program group of 1969-1970 had a lower percentage of over-achievers than did the graded system group of 1967-1968.

8. As to the area of Arithmetic, the 1968-1969 continuous progress program group had a greater percentage of over-achievers than did the 1966-1967 graded system group. On the other hand, the 1969-1970 continuous progress program group had a lower percentage of over-achievers than did the 1967-1968 graded system group.

9. In the area of Composite Scores, the graded system group of 1966-1967 had a greater percentage of over-achievers than the continuous progress program group of 1968-1969. However, the graded system group of 1967-1968 had a lesser percentage of over-achievers than did the continuous progress program group of 1969-1970.

10. The 1969-1970 continuous progress program group had a greater percentage of over-achievers than any other group in the areas of Vocabulary, Reading,

Language-Usage and Composite Scores. They had the second highest percentage of over-achievers in References and the third highest percentage in Arithmetic.

11. Except for Reading and Composite Scores, the 1966-1967 graded system group had fewer over-achievers, percentage-wise, than any other group. The smallest percentage of over-achievers in Reading and Composite Scores was the continuous progress program group of 1968-1969.

## II. CONCLUSIONS

After interpreting the data gathered from the Iowa Tests of Basic Skills of fourth grade (E-5) students for the school years 1966-1970 and comparing these results with the Otis Lennon Mental Ability tests taken during these students' second grade (E-3) school year, the following conclusions seemed justified.

1. There does not seem to be any appreciable difference in achievement levels between students educated under the continuous progress program and the graded system.
2. The results of this study seem to indicate that there may be reason to believe that the continuous progress program may need to be in effect for some

time before its maximum potential may be realized. The 1969-1970 continuous progress program group had fewer students, on a percentage basis, of under-achievers than any of the other three groups evaluated. Also, this 1969-1970 group had a greater percentage of over-achievers, in total, than any of the other three groups.

Basic decisions of policy in school systems should not be made on the basis of one research report. This investigator believes that further study should be done in this area of comparison between the continuous progress program and the graded system.

On the basis of this investigation, it would appear to be most worthwhile for similar evaluations to be made during the next few years of additional continuous progress program groups. It would be most interesting to learn whether or not this ungraded approach to education continues to show gains of over-achievers and fewer under-achievers as did the 1969-1970 group in comparison to the 1968-1969 continuous progress program group. With any change of this scope in a school system, it may very well take several years for the maximum gains to be realized.

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# APPENDIX

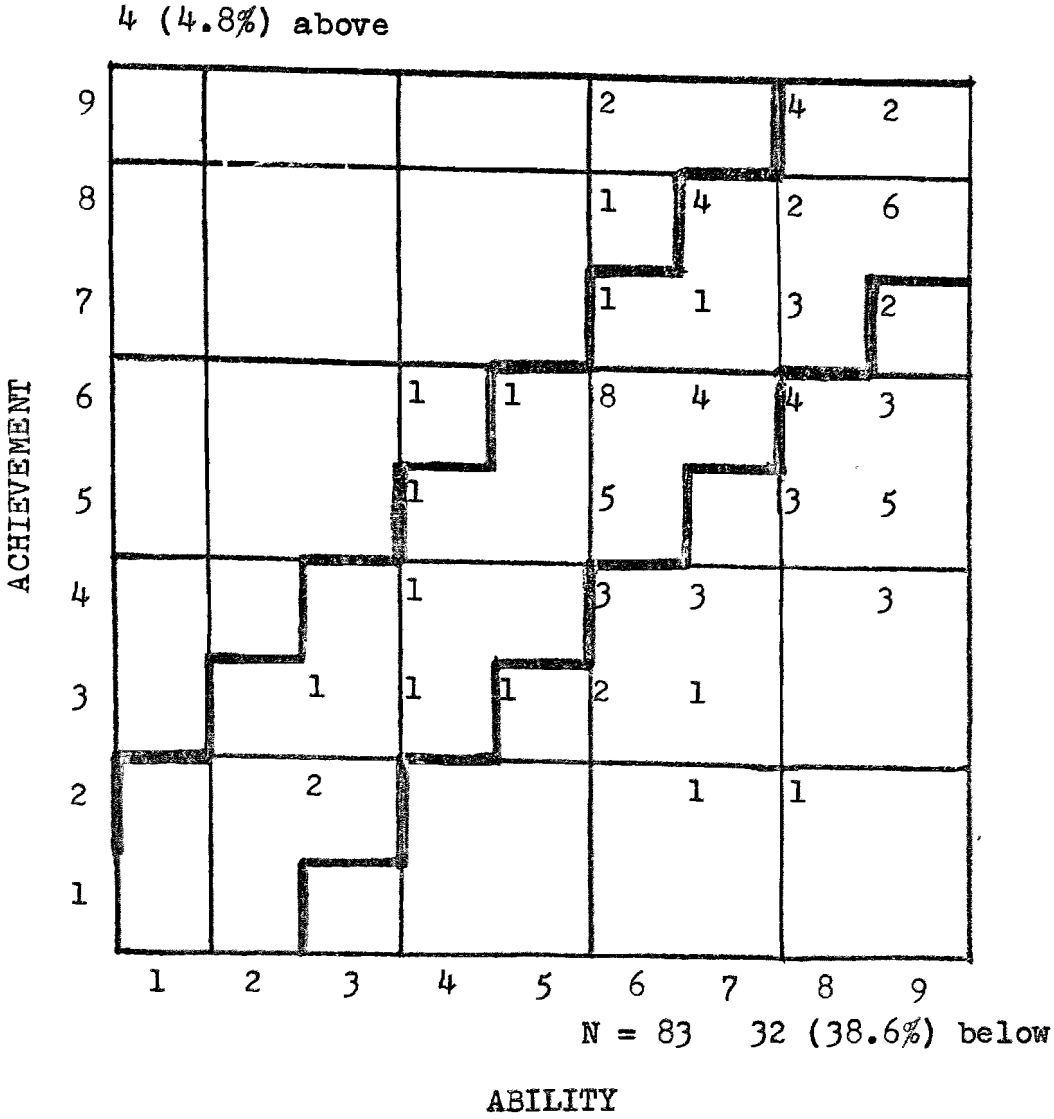



Figure 1. Ability vs. Achievement Stanines--For Graded System Group During 1966-1967 School Year in Area of Vocabulary.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

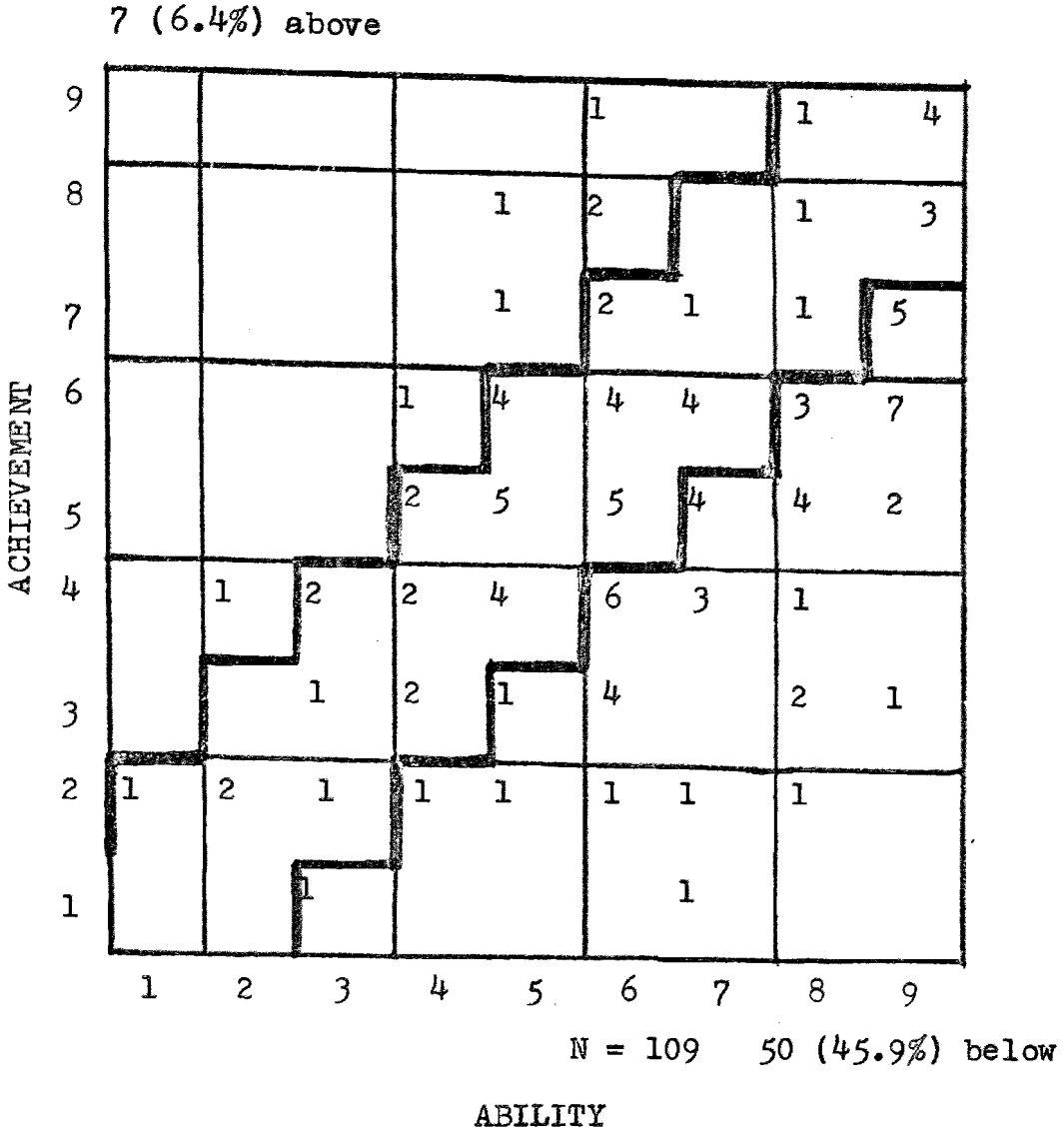



Figure 2. Ability vs. Achievement Stanines--For Graded System Group During 1967-1968 School Year in the Area of Vocabulary.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

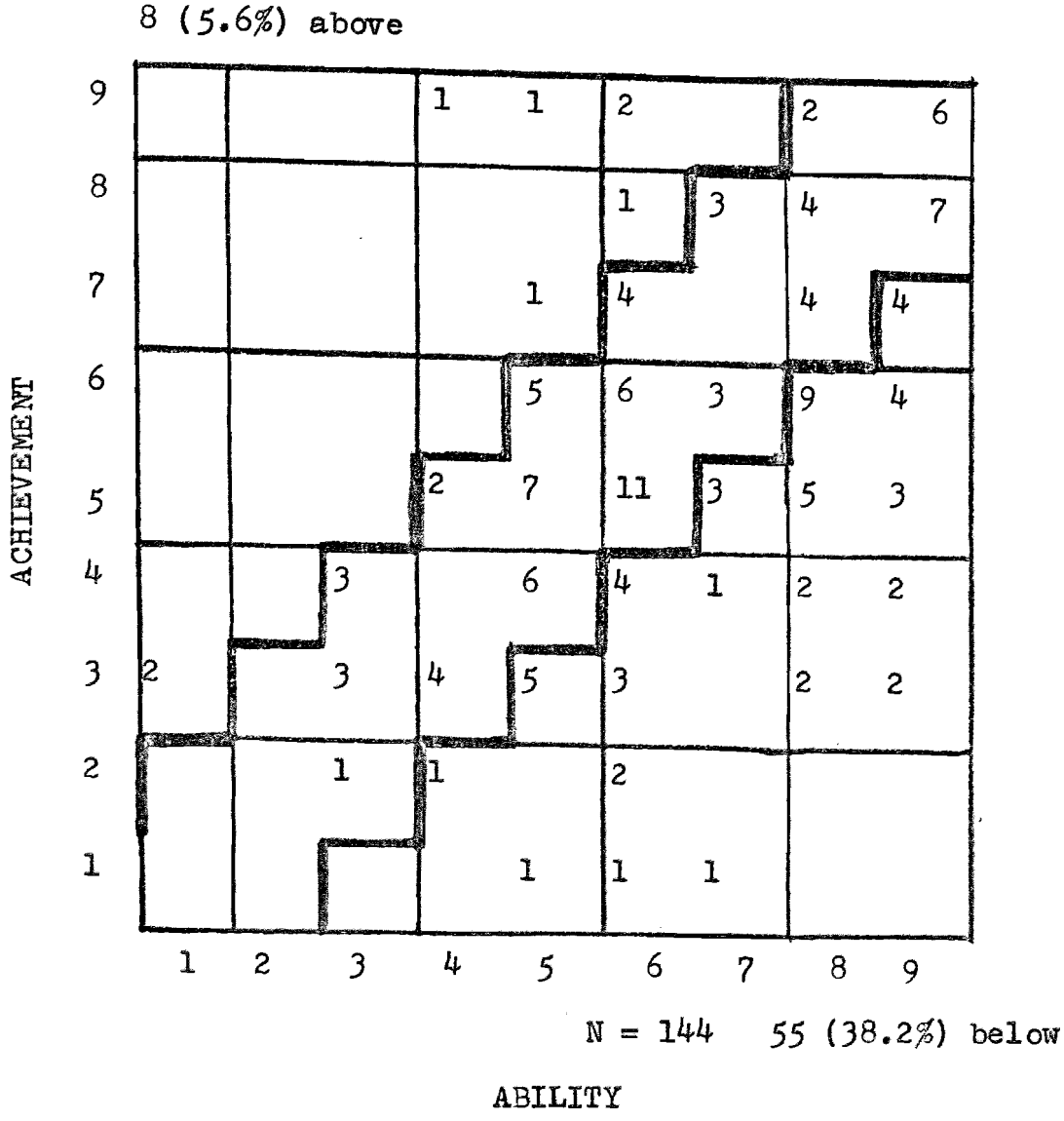



Figure 3. Ability vs. Achievement Stanines--For Continuous Progress Group During 1968-1969 School Year in Area of Vocabulary.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

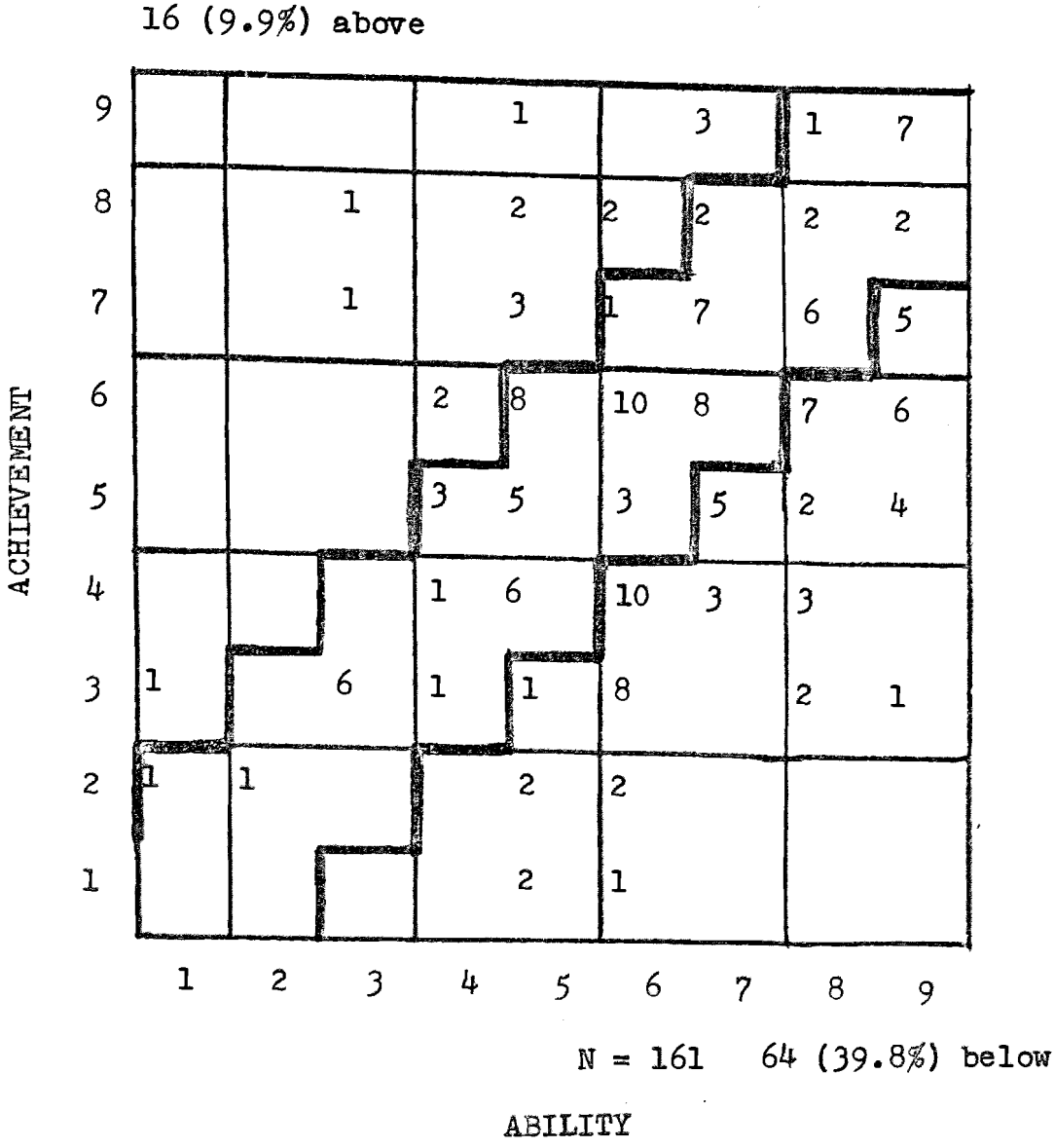



Figure 4. Ability vs. Achievement Stanines--For Continuous Progress Group During 1969-1970 School Year in Area of Vocabulary.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

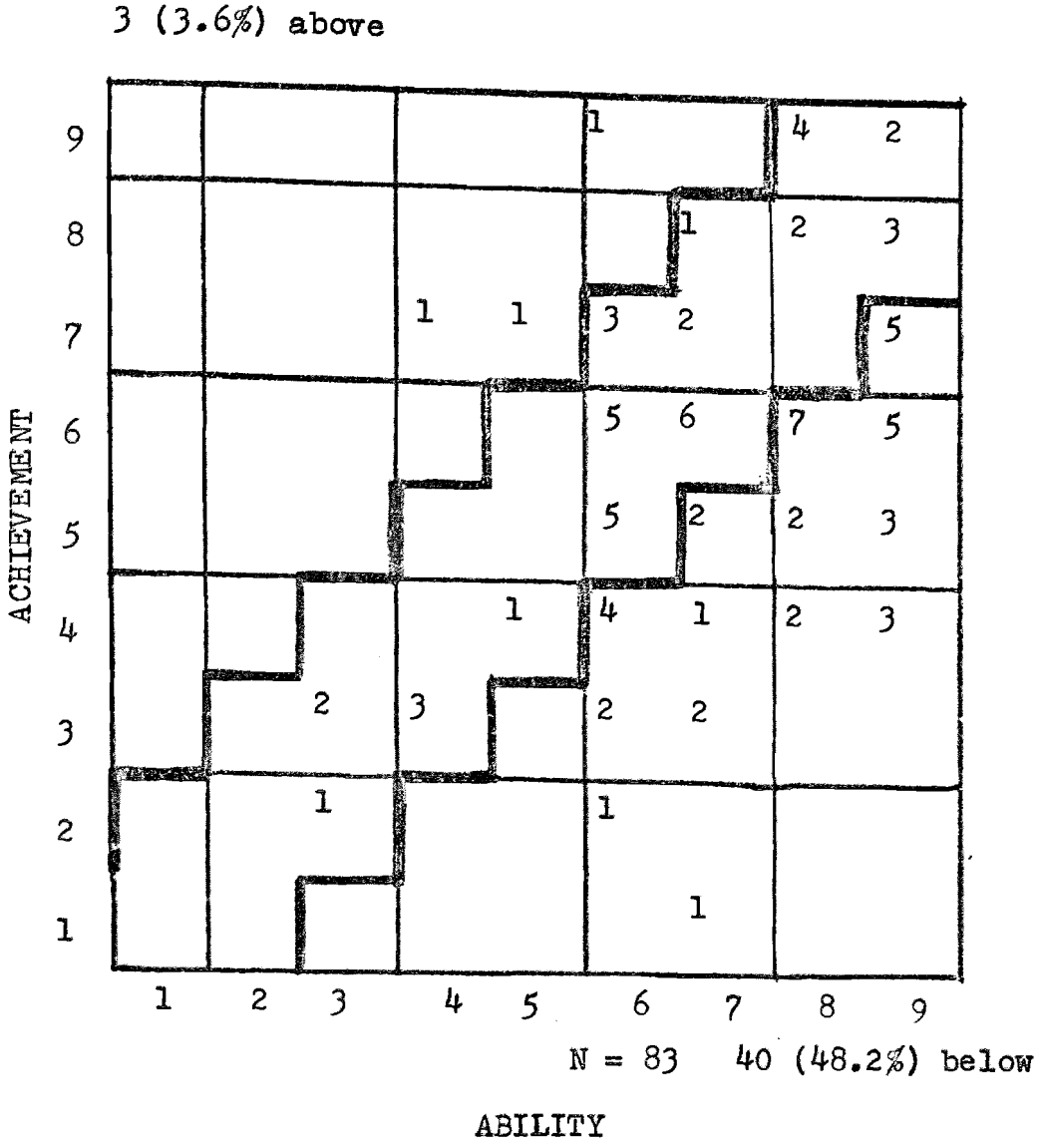



Figure 5. Ability vs. Achievement Stanines--For Graded System Group During 1966-1967 School Year in Area of Reading.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

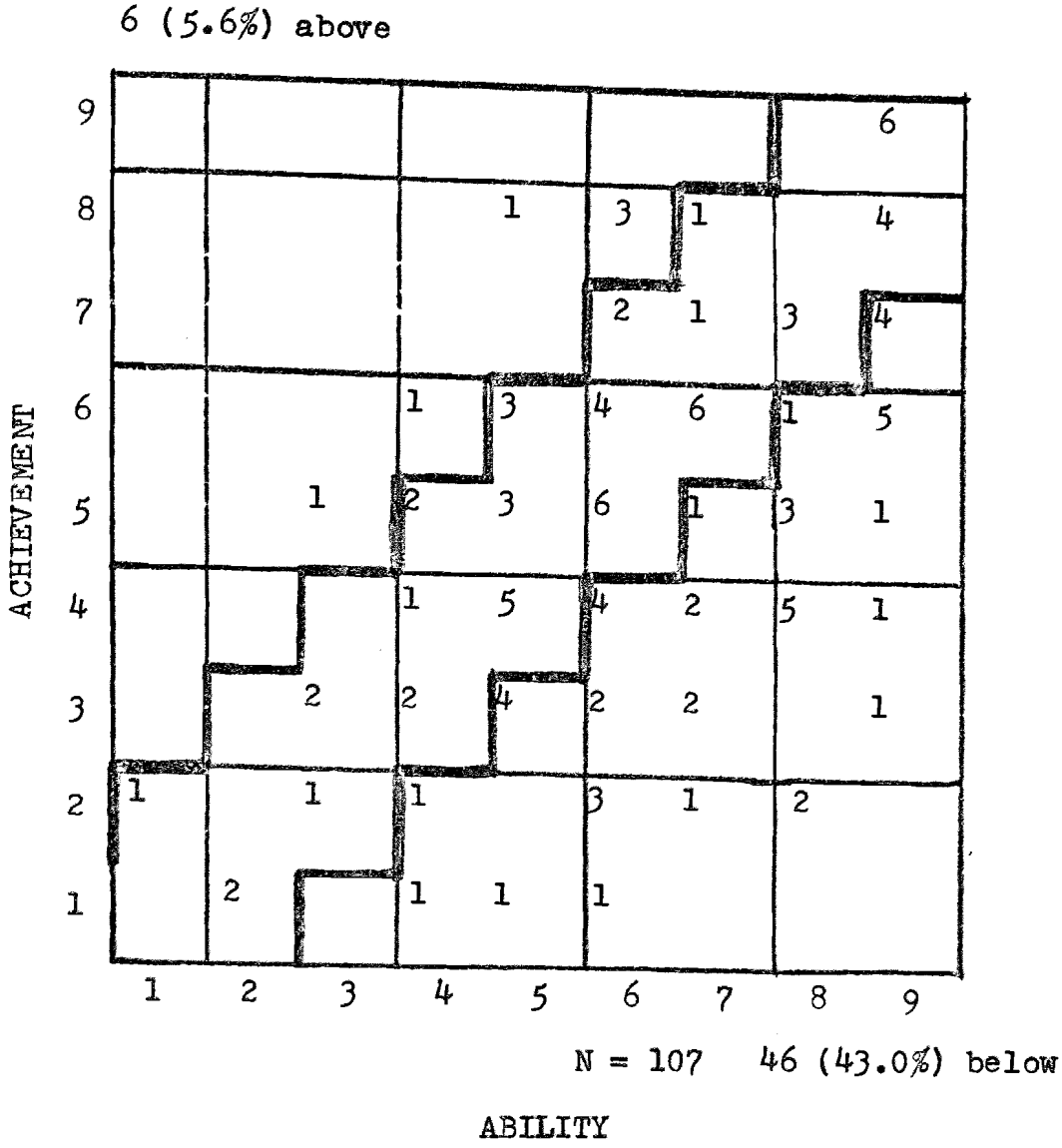



Figure 6. Ability vs. Achievement Stanines--For Graded System Group During 1967-1968 School Year in Area of Reading.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

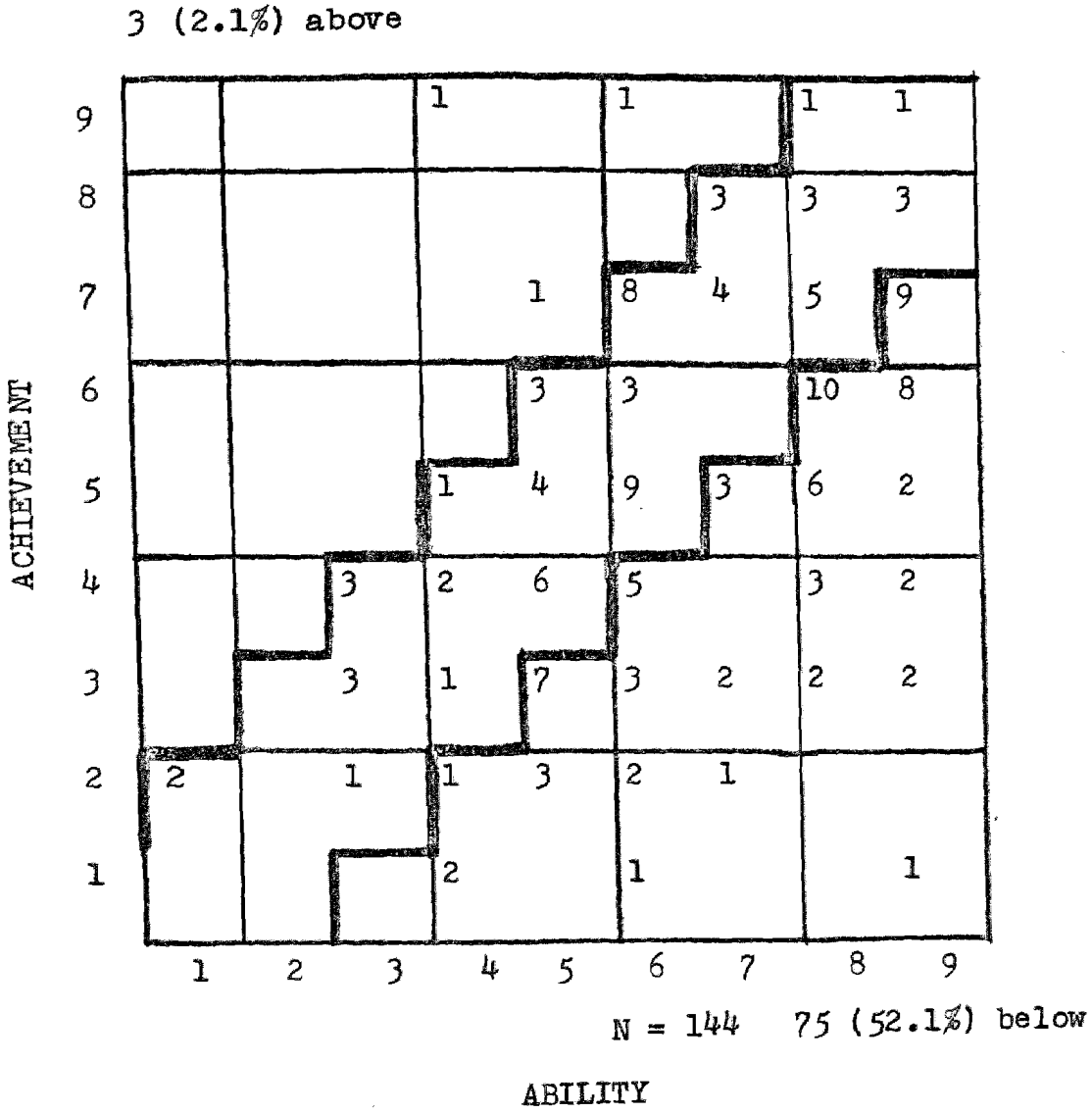



Figure 7. Ability vs. Achievement Stanines--For Continuous Progress Group During 1968-1969 School Year in Area of Reading.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

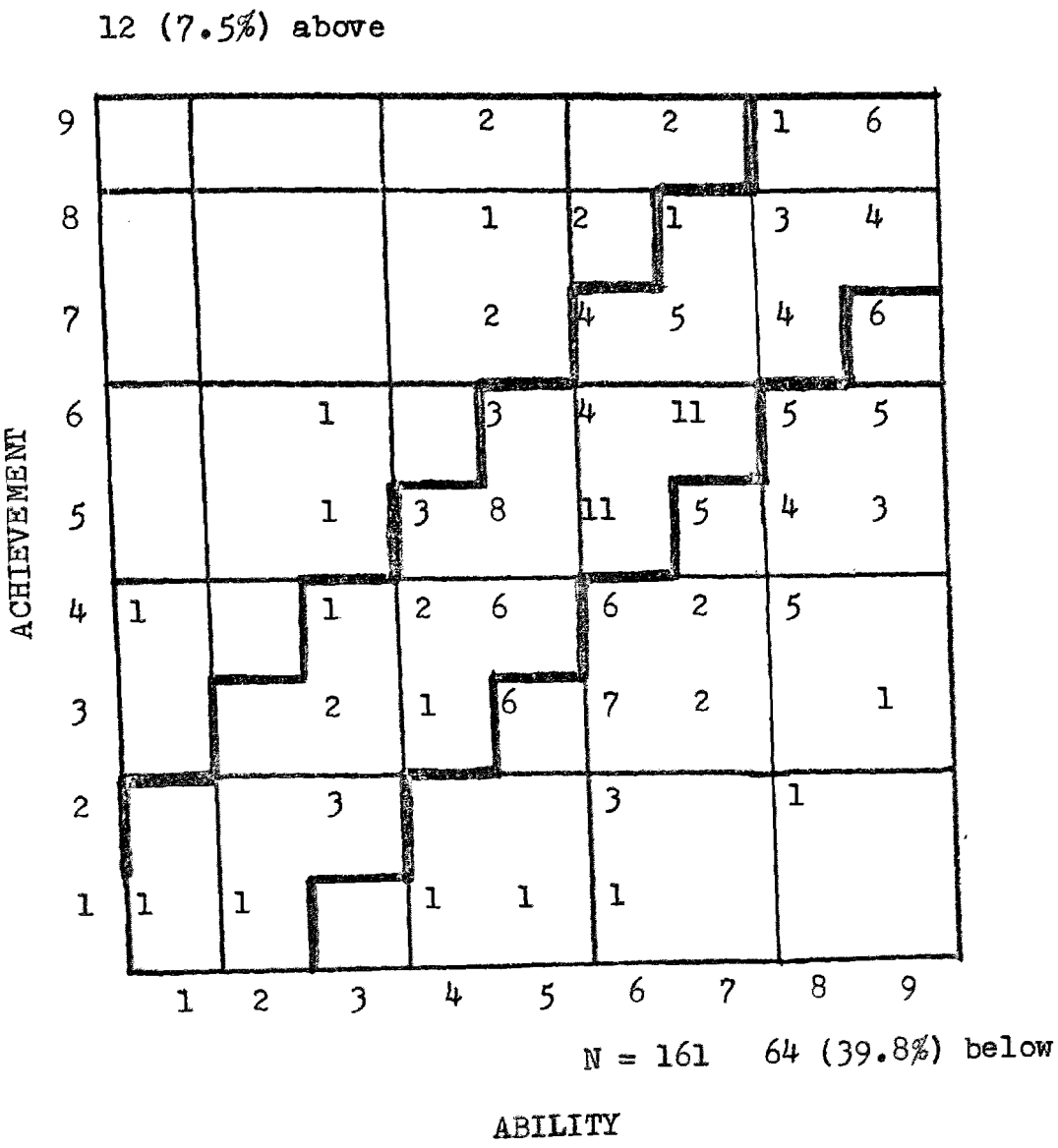



Figure 8. Ability vs. Achievement Stanines--For Continuous Progress Group During 1969-1970 School Year in Area of Reading.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

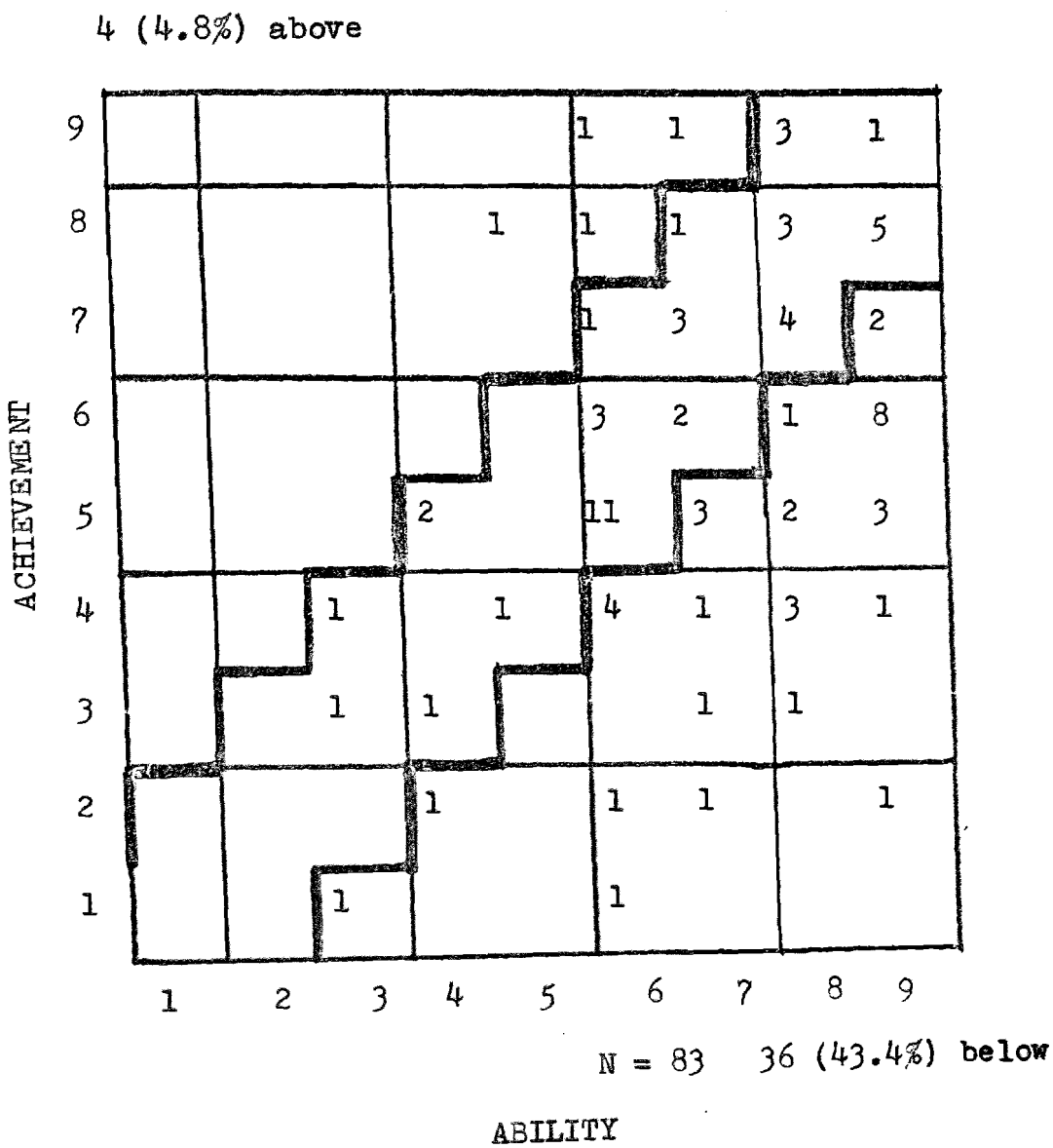



Figure 9. Ability vs. Achievement Stanines--For Graded System Group During 1966-1967 School Year in Area of Language-usage.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

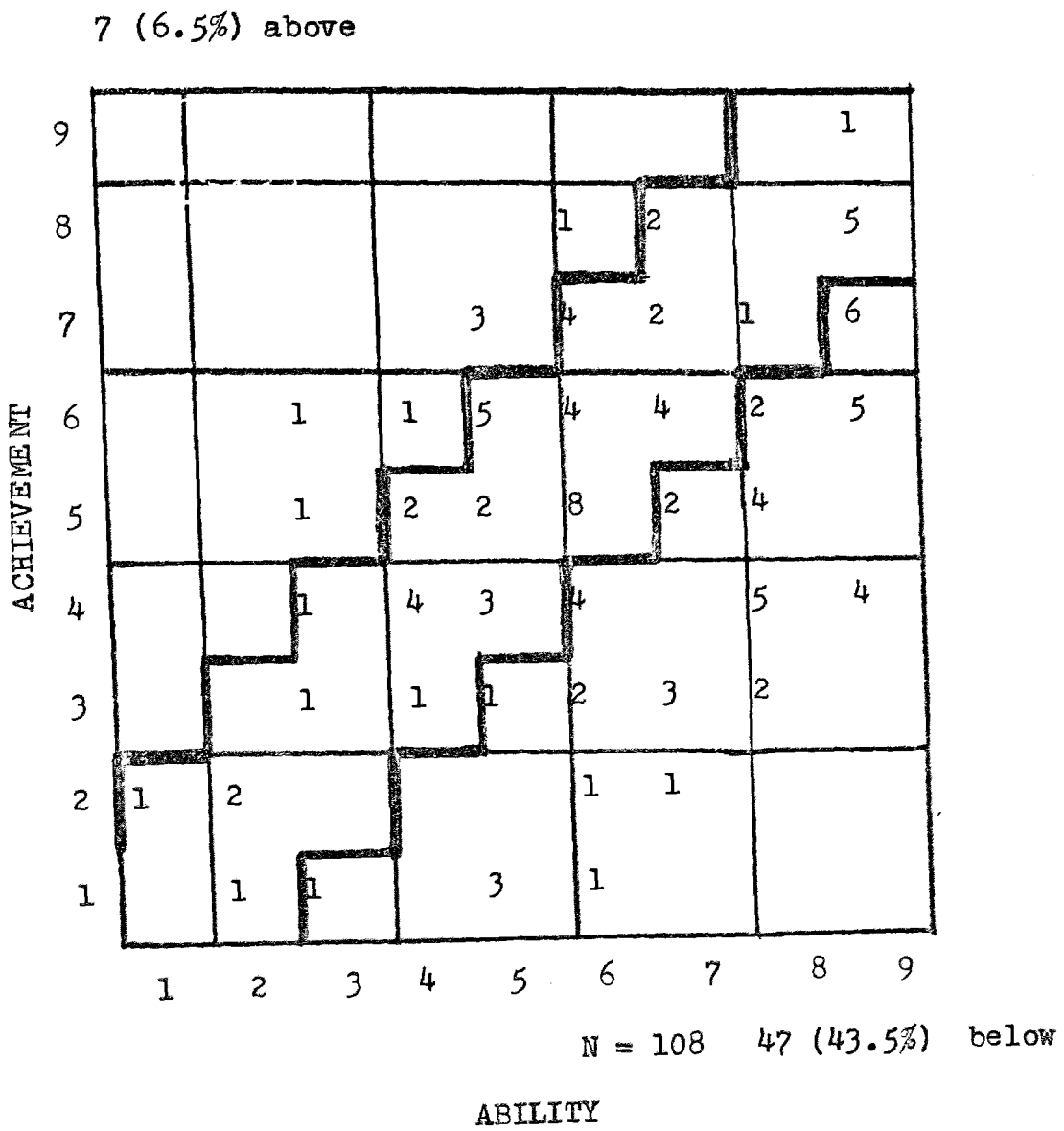



Figure 10. Ability vs. Achievement Stanines--For Graded System Group During 1967-1968 School Year in Area of Language-usage.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

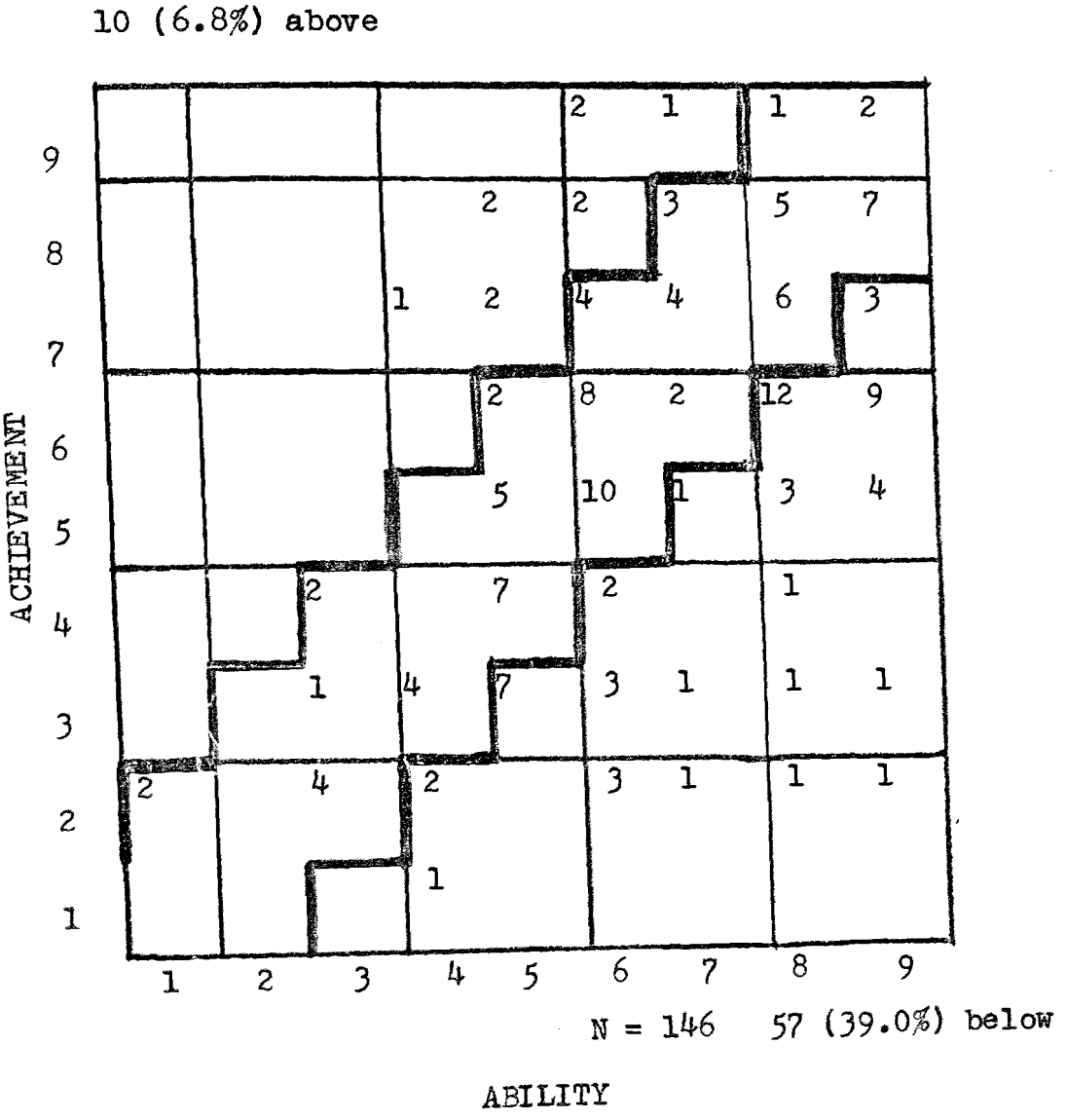
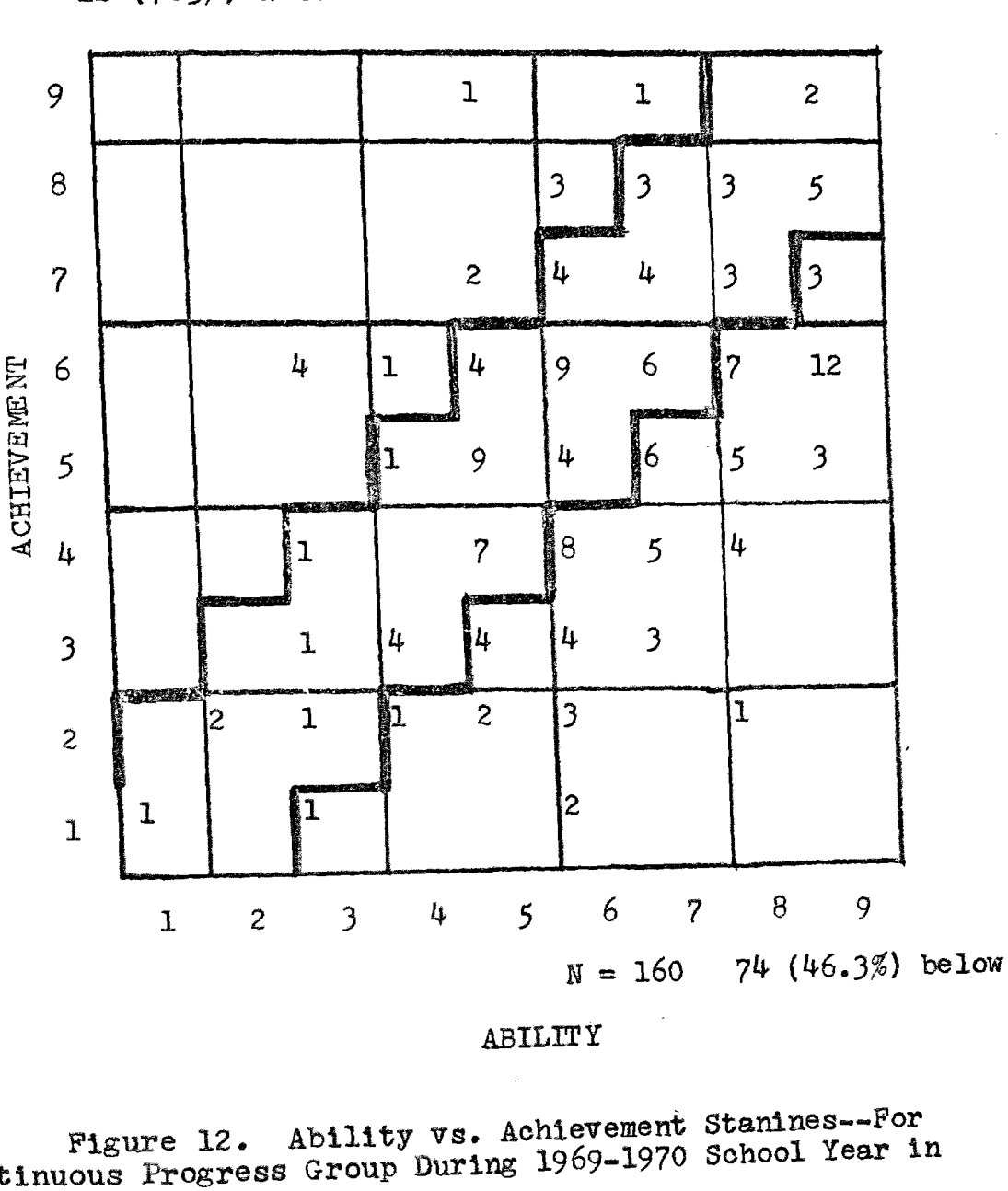



Figure 11. Ability vs. Achievement Stanines--For Continuous Progress Group During 1968-1969 School Year in Area of Language-usage.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

12 (7.5%) above




N = 160 74 (46.3%) below

Figure 12. Ability vs. Achievement Stanines--For Continuous Progress Group During 1969-1970 School Year in Area of Language-usage.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

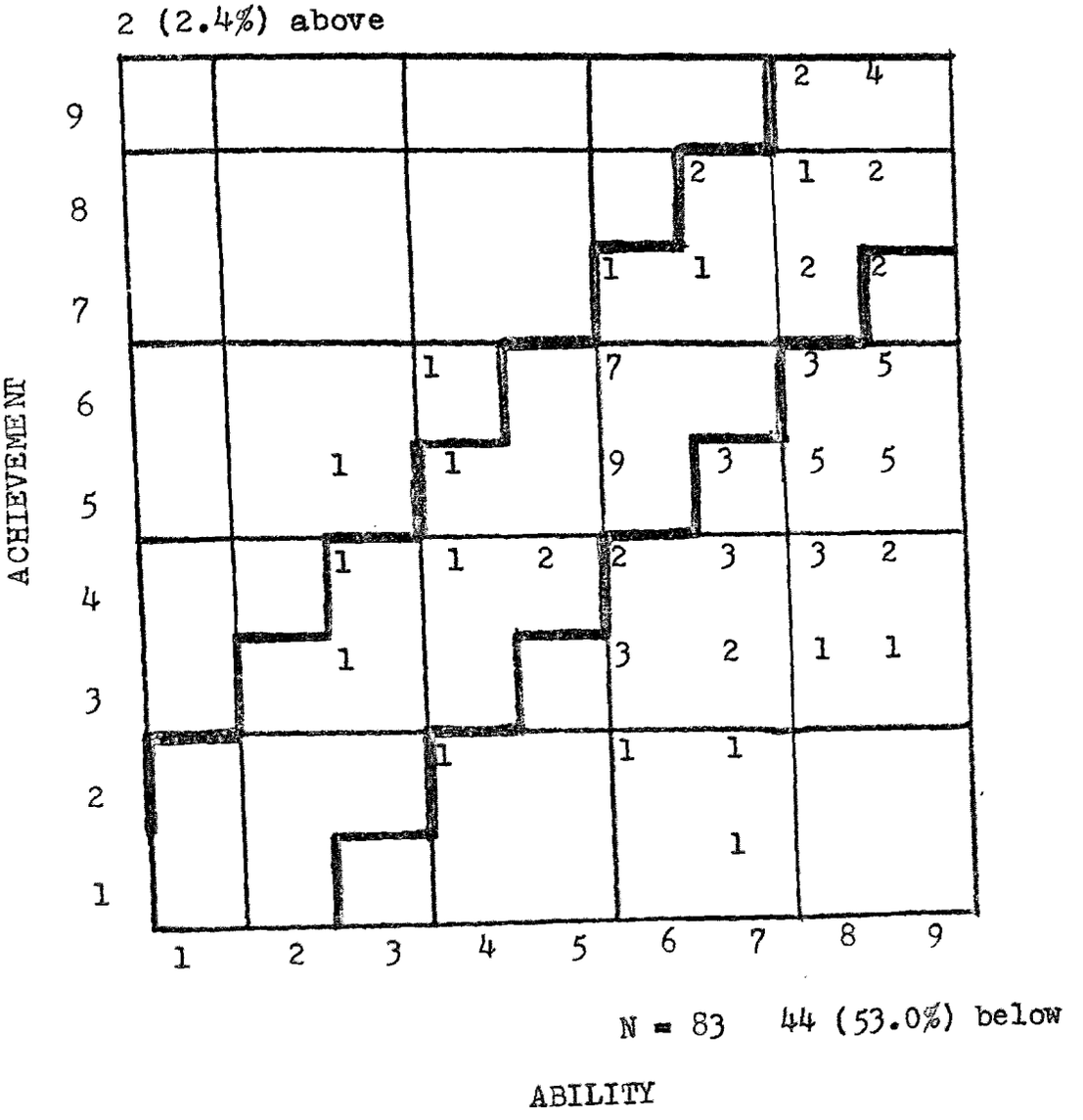



Figure 13. Ability vs. Achievement Stanines--For Graded System Group During 1966-1967 School Year in Area of References.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

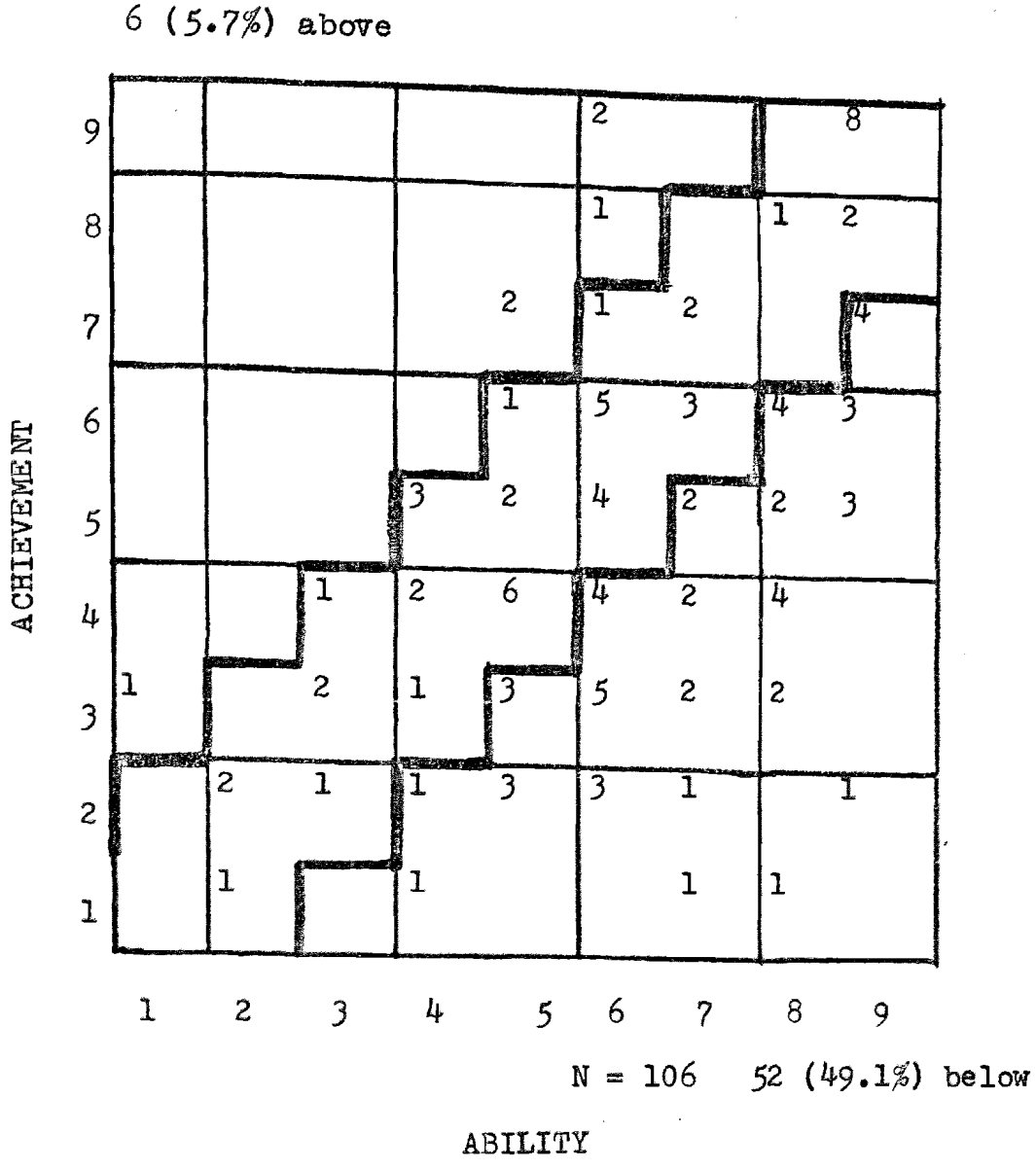



Figure 14. Ability vs. Achievement Stanines--For Graded System Group During 1967-1968 School Year in Area of References.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

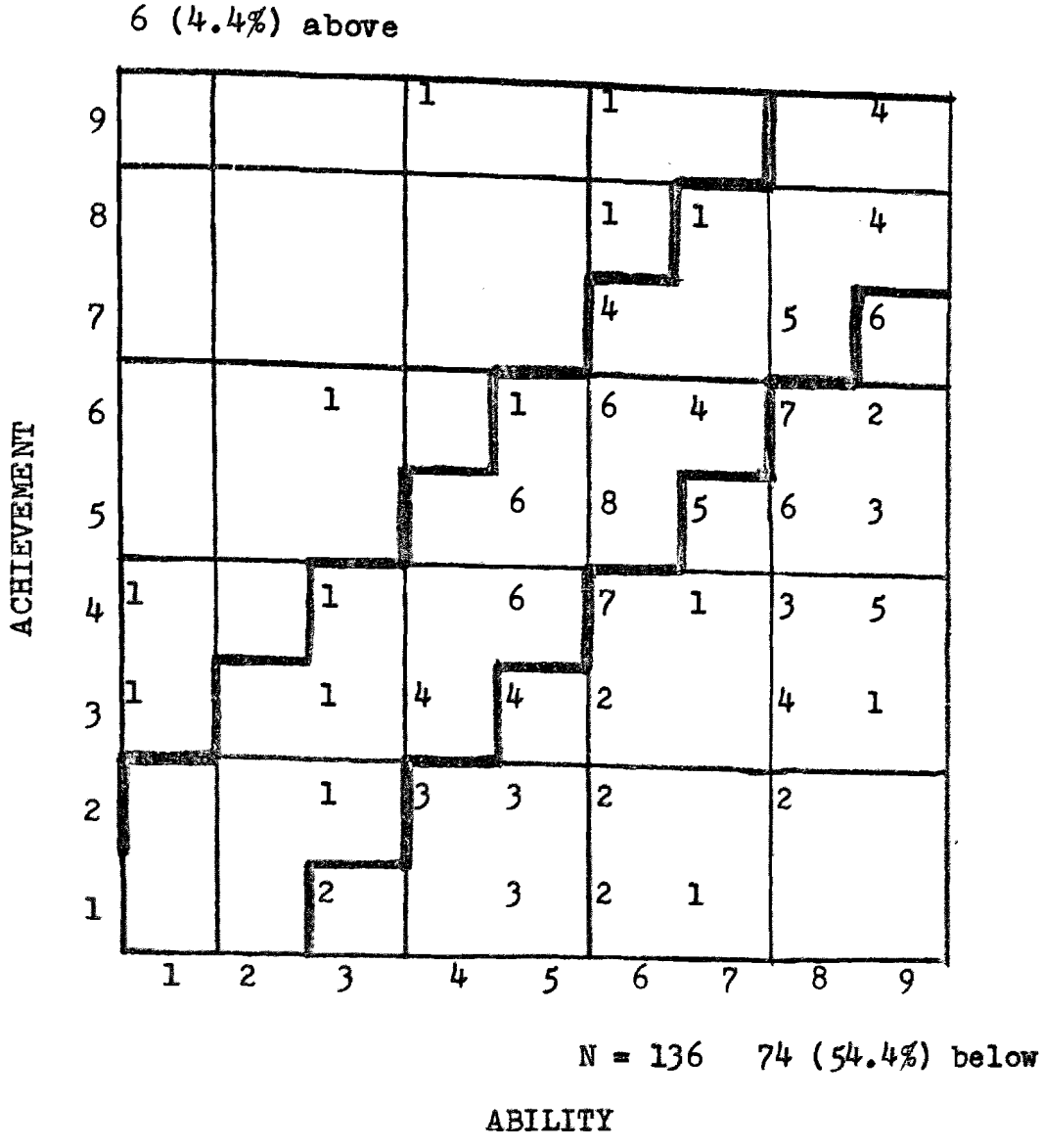



Figure 15. Ability vs. Achievement Stanines--For Continuous Progress Group During 1968-1969 School Year in Area of References.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

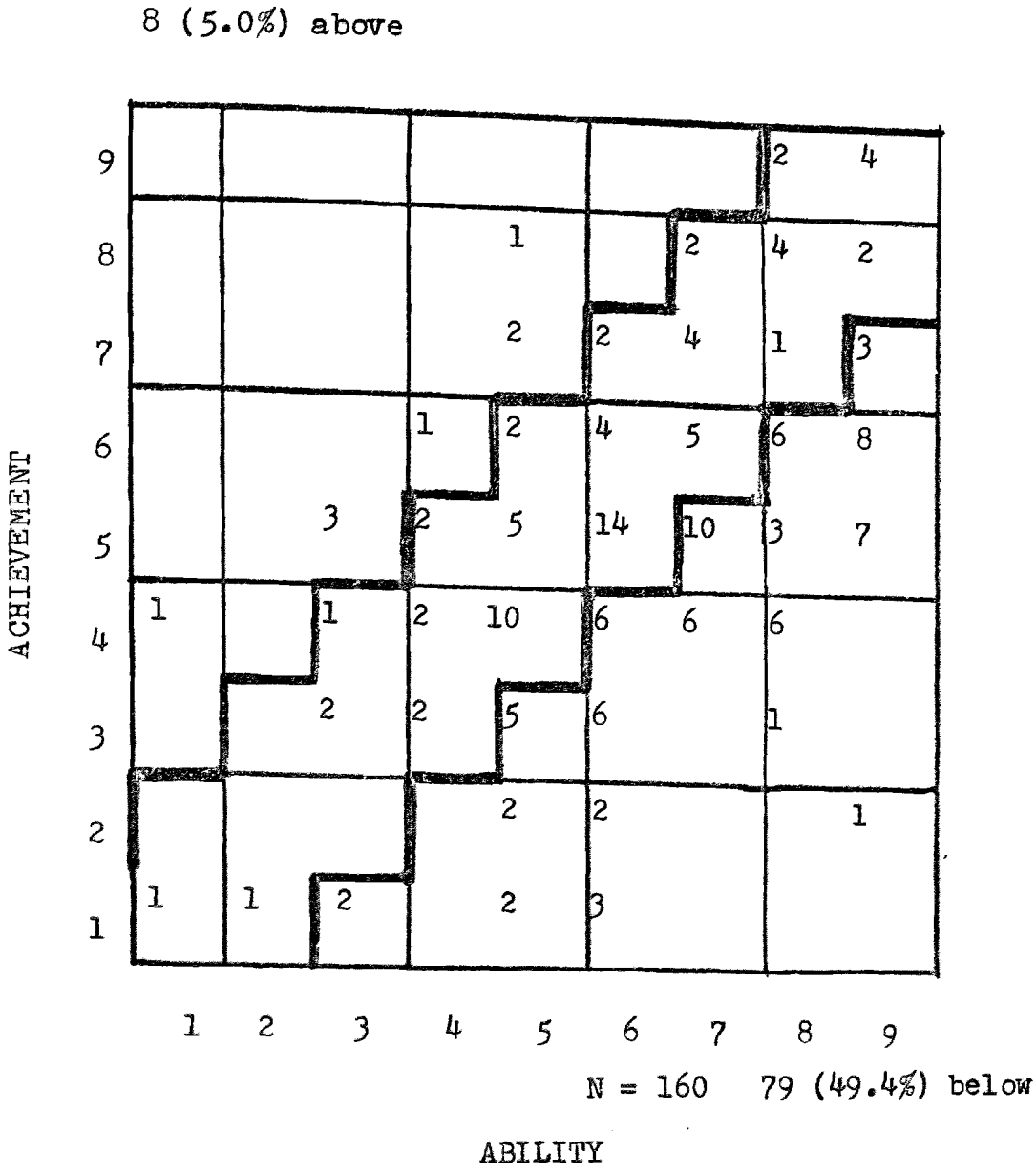
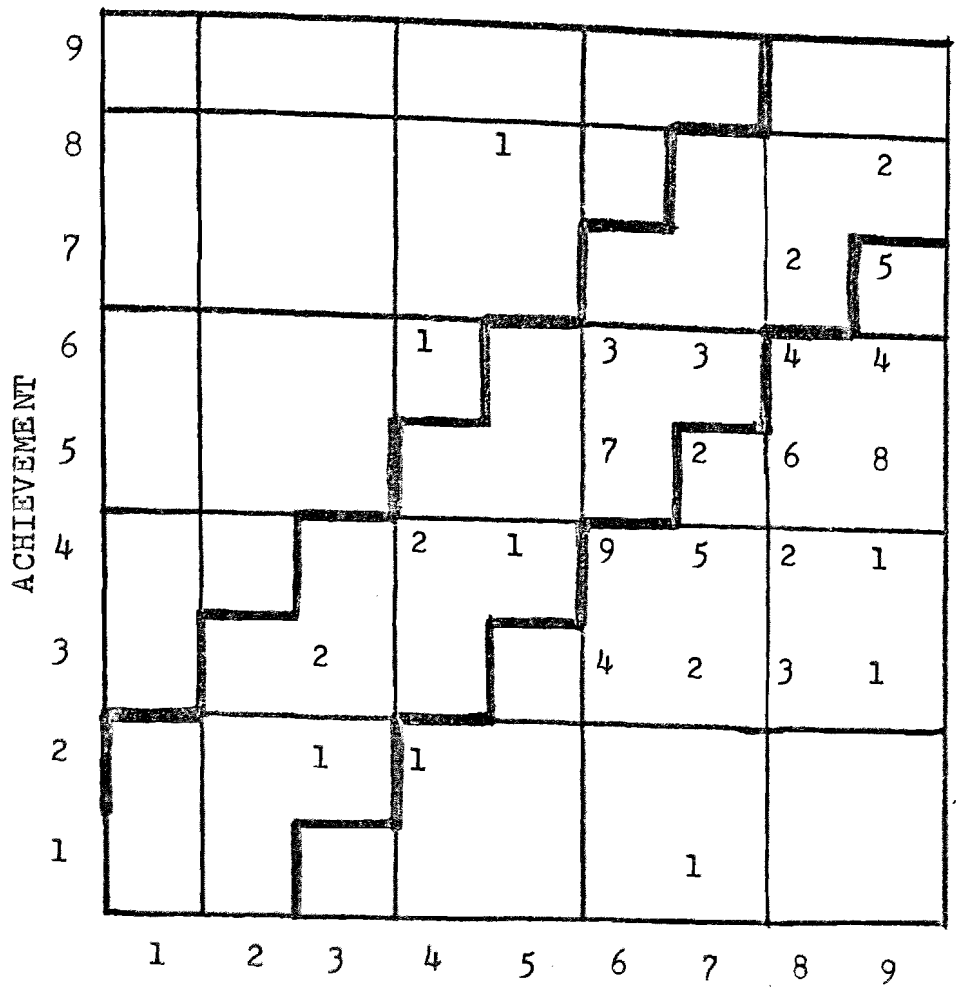



Figure 16. Ability vs. Achievement Stanines--For Continuous Progress Group During 1969-1970 School Year in Area of References.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

2 (2.4%) above




N = 83 58 (69.9) below

ABILITY

Figure 17. Ability vs. Achievement Stanines--For Graded System Group During 1966-1967 School Year in Area of Arithmetic.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

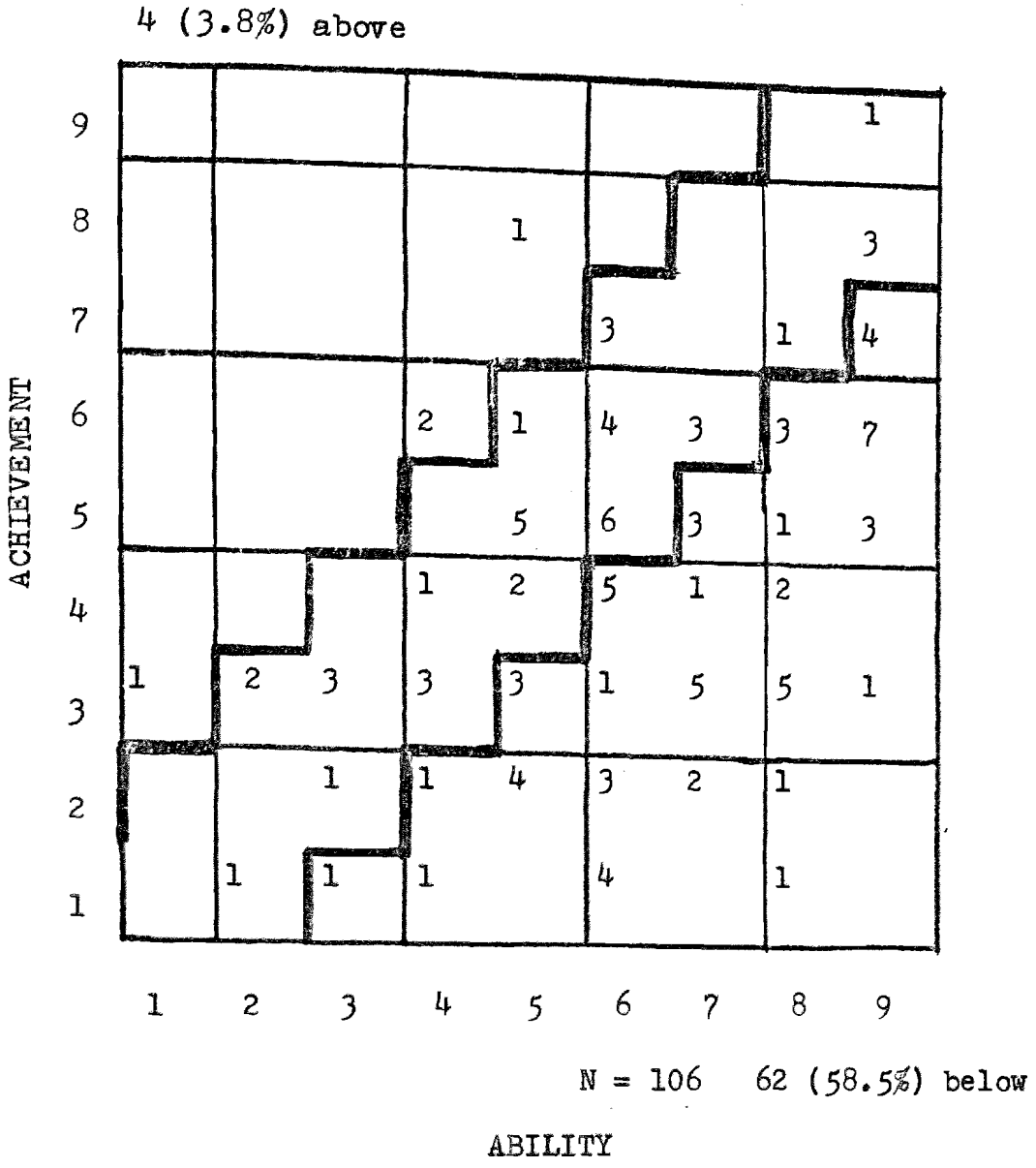



Figure 18. Ability vs. Achievement Stanines--For Graded System Group During 1967-1968 School Year in Area of Arithmetic.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

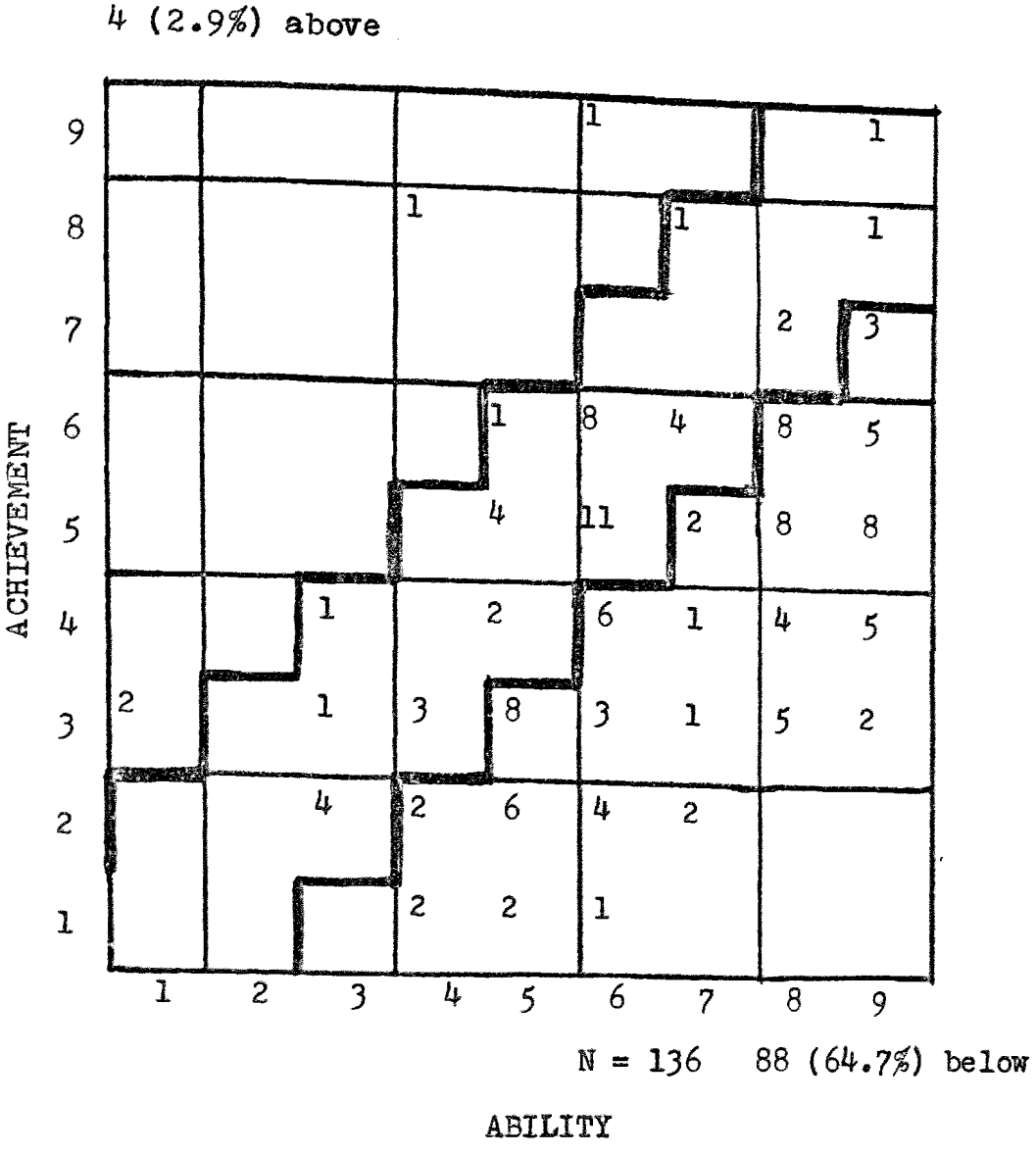



Figure 19. Ability vs. Achievement Stanines--For Continuous Progress Group During 1968-1969 School Year in Area of Arithmetic.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

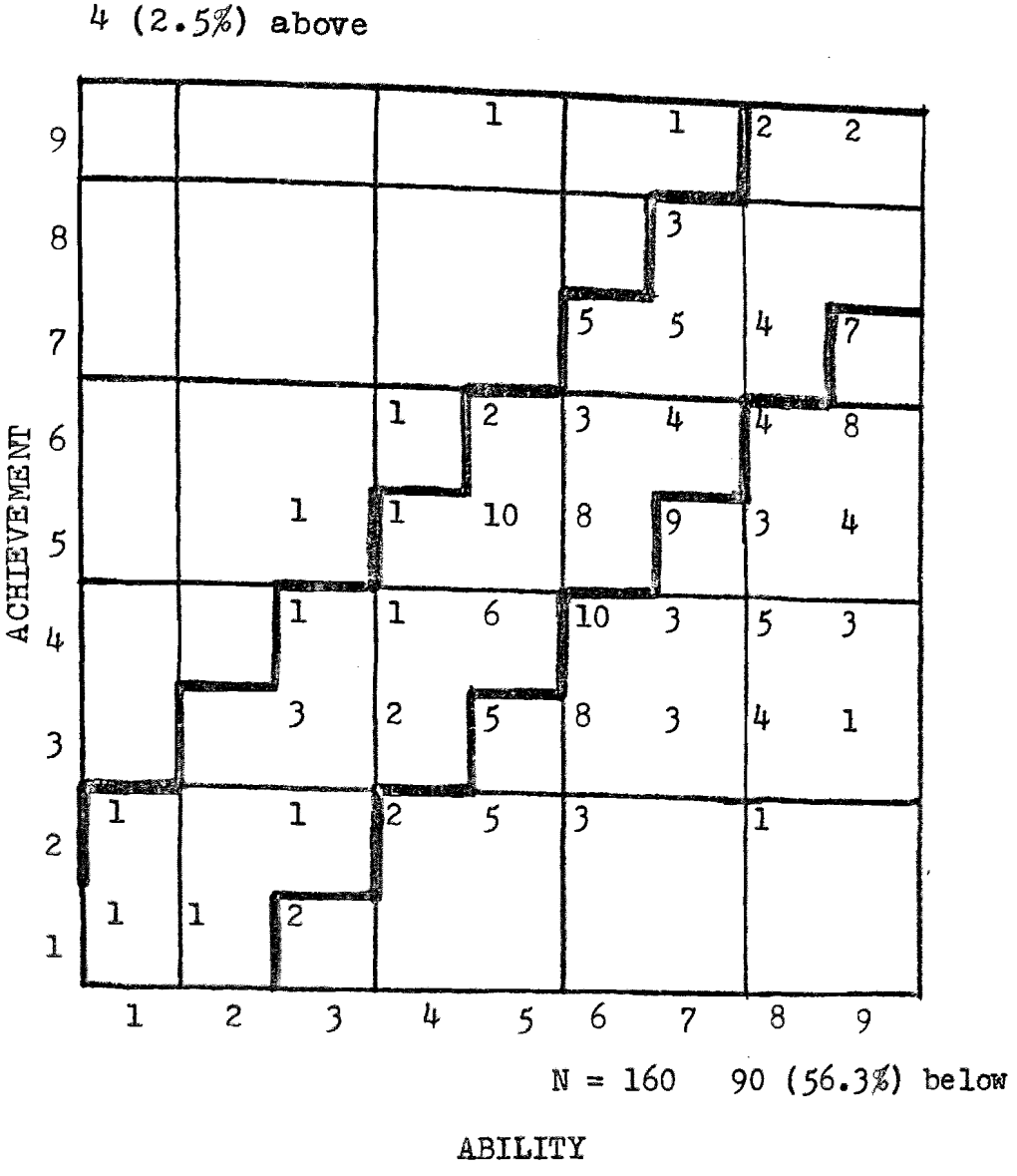



Figure 20. Ability vs. Achievement Stanines--For Continuous Progress Group During 1969-1970 School Year in Area of Arithmetic.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

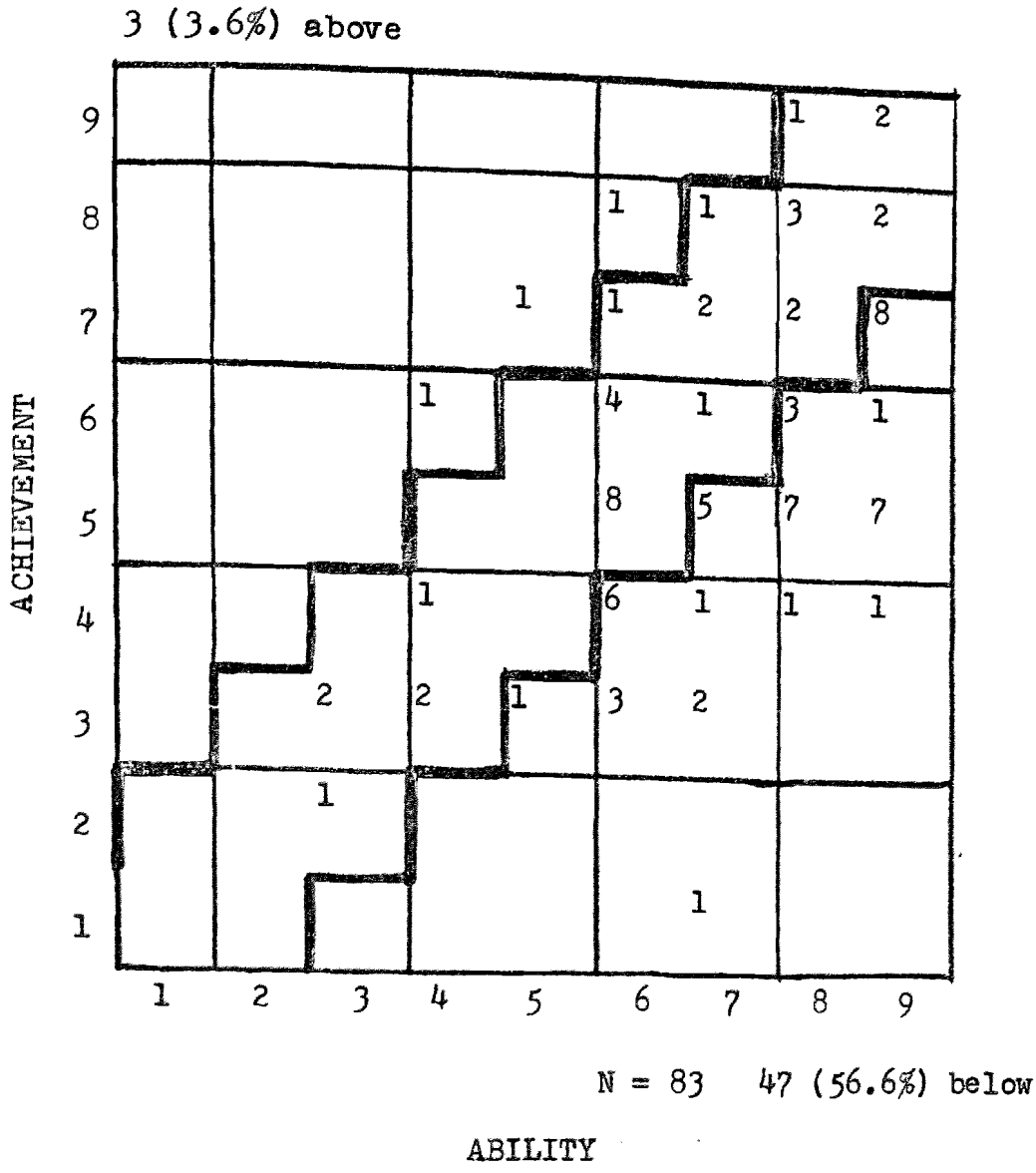



Figure 21. Ability vs. Achievement Stanines--For Graded System Group During 1966-1967 School Year in Area of Composite.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

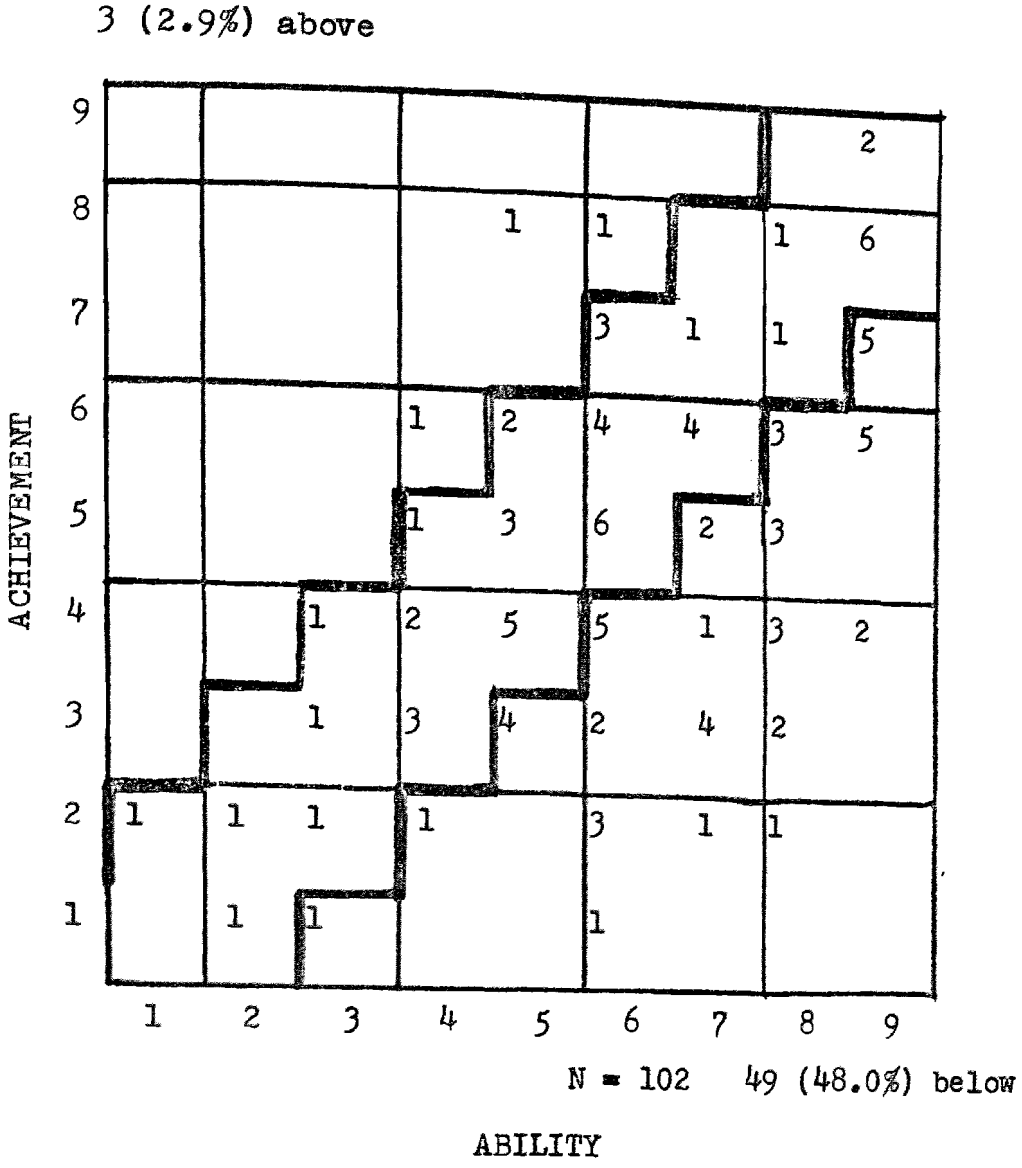
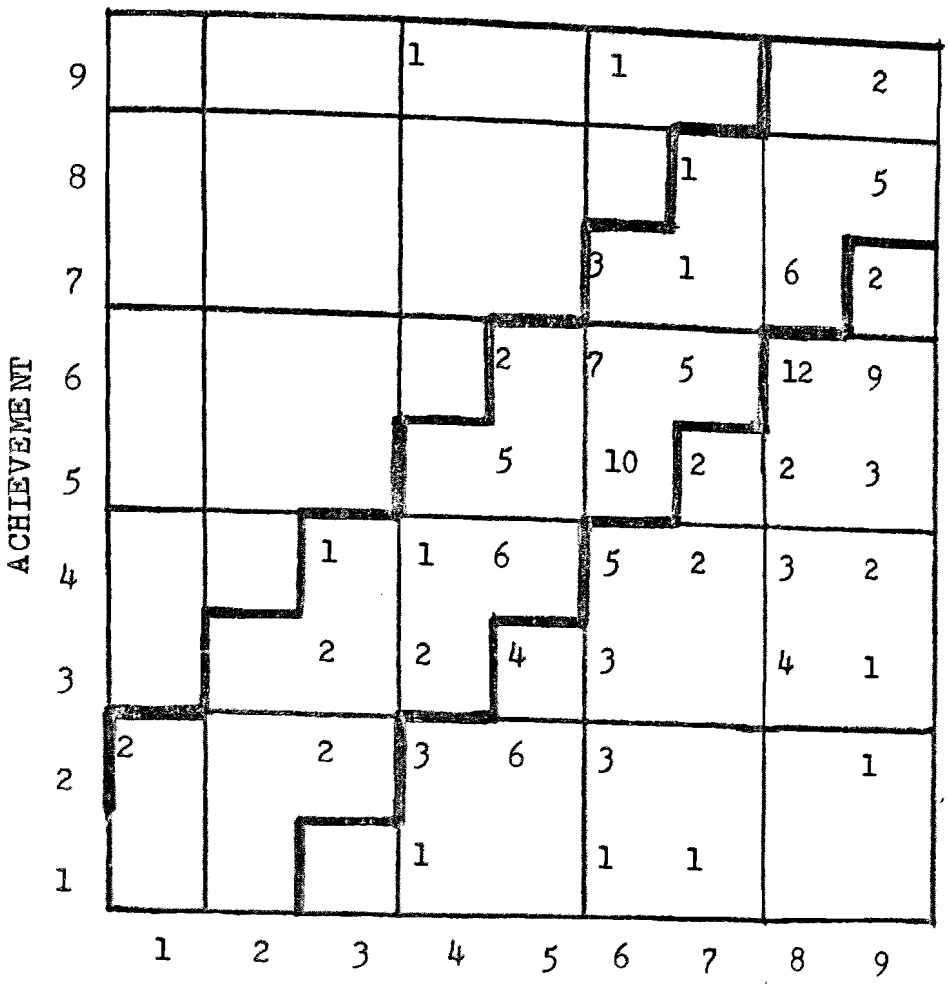



Figure 22. Ability vs. Achievement Stanines--For Graded System Group During 1967-1968 School Year in Area of Composite.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

2 (1.5%) above



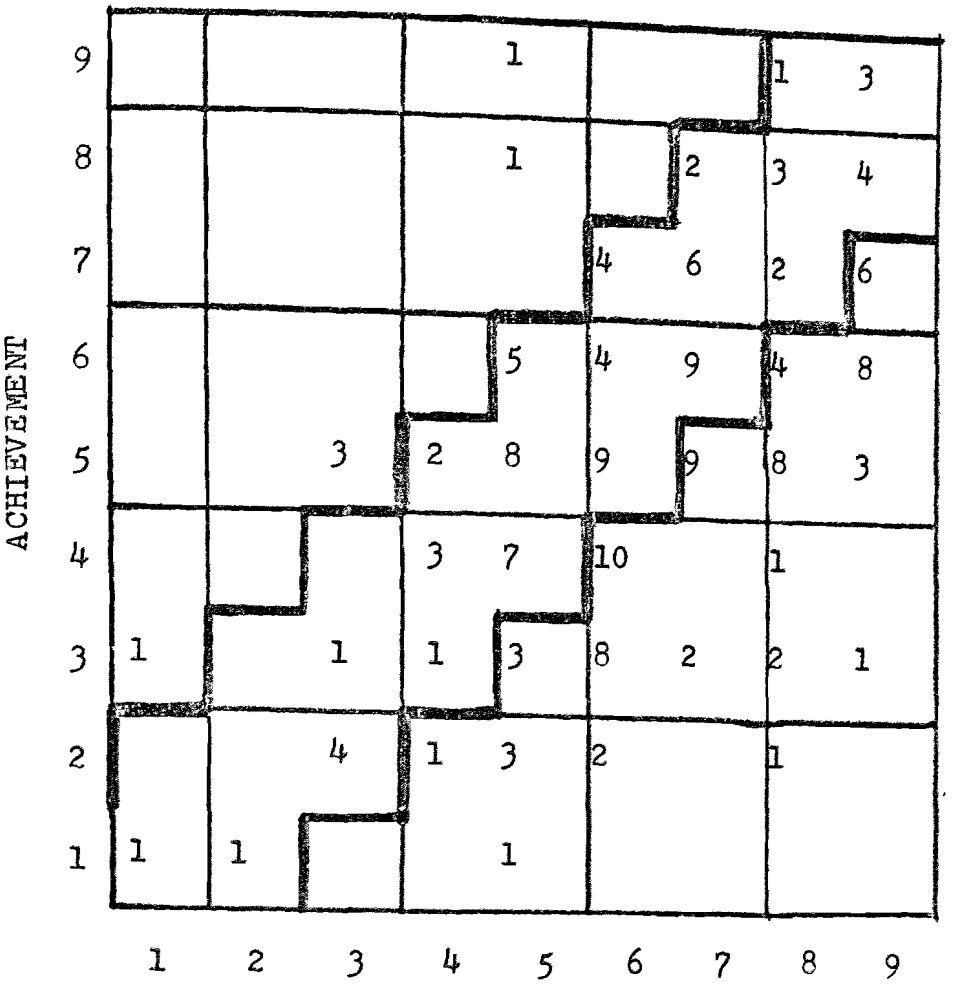

N = 135 70 (51.9%) below

ABILITY

Figure 23. Ability vs. Achievement Stanines--For Continuous Progress Group During 1968-1969 School Year in Area of Composite.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools

6 (3.8%) above




N = 159 73 (45.9%) below

ABILITY

Figure 24. Ability vs. Achievement Stanines--For Continuous Progress Group During 1969-1970 School Year in Area of Composite.

Fourth Grade (E-5), Urbandale, Iowa, Elementary Schools